



# **Environmental Standards & Trade**

*A Study of Indian  
Textiles & Clothing Sector*



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# Abbreviations

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ADEM:	Environment Protection and Energy Agency (France)
AFNOR:	Association Française de Normalisation
AGOA:	African Growth and Opportunity Act
ATC:	Agreement on Textiles & Clothing
CFE:	Comité Francois des Ecolabels
CPA:	Climate and Pollution Agency (Norway)
CSR:	Corporate Social Responsibility
CTE	Committee on Trade and Environment
DIFI:	Agency for Public Management and eGovernance
EC:	European Commission
EEC:	European Economic Community
EPA:	Environment Protection Agency (USA)
EPIS:	Environmental Product Information Systems
ETB:	Environmental Trade Barriers
ETI:	Ethical Trading Initiatives
EU:	European Union
FLO:	Fair-trade Labelling Organisation
GAP:	Global Action Plan (Norway)
GDP:	Gross Domestic Product
GEN:	Global Eco-labelling Network

GHG:	Greenhouse Gas
GOTS:	Global Organic Textile Standard
GPP:	Green Public Procurement (Norway)
H&M:	Hermes & Mauritz
ISO:	International Organisation for Standardisation
MFA:	Multi Fibre Agreement
MFN:	Most Favoured Nation
NCR:	National Capital Region
NEPI:	New Environmental Policy Instruments
NGO:	Non-government Organisation
NOK:	Norwegian krone
NOP:	National Organic Programme
NTMs:	Non-tariff Measures
OECD:	Organisation for Economic Cooperation and Development
REACH:	Registration, Evaluation, Authorisation and Restriction of Chemicals
SA:	Social Accountability
SAC:	Sustainable Apparel Coalition
SBA:	Sustainable Business Associates
SIFO:	National Institute for Consumer Research
SMEs:	Small and Medium Enterprises
SPS:	Sanitary & Phyto-Sanitary
SSNC:	Swedish Society for Nature Conservation
T&C:	Textiles and Clothing
TBT:	Technical Barriers to Trade

UAE:	United Arab Emirates
UK:	United Kingdom
UN:	United Nations
UNEP:	United Nations Environment Protection
US:	United States
USD:	US dollar
USDA:	United States Department of Agriculture
VAT:	Value Added Tax
WRAP:	Worldwide Responsible Accredited Production Principles
WTO:	World Trade Organisation



## Note on Contributors

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**Archana Jatkar** is Coordinator and Deputy Head of CUTS Centre for Trade, Economics & Environment (CUTS CITEE). She is a law graduate (LLM) from University of Kent (UK) and specialises in International Economic Law. She has been leading and coordinating the Centre's activities in three core areas of WTO Issues, Regional Economic Cooperation and Trade and Development. Her research interest includes international trade policy issues, environmental standards, international trade disputes; trade in services and intellectual property rights. She has written several papers on international economic law and related WTO Issues.

**Eivind Stø** is Mag.art. in Political Science from the University of Oslo Norway, 1972. He has been Director of Research at SIFO from 1998. Stø has experience of research at the Norwegian Electoral Programme at Institute for Social Sciences (1972-1876) and of consumer research at the Norwegian Fund for Market and Distribution Research (1979-1988). He was the first editor of the Norwegian Journal of Political Science 1985-1988 and has published a number of articles and book chapter about politics of consumption. Stø has been Chair of the "Sociology of Consumption Working Group" under the European Sociology Association 2001-2005.

**Manbar Khadka** is an M.S. in Agricultural & Resource Economics from the University of Maryland at College Park, USA and B.A. in Economics from Wabash College at Crawfordsville, Indiana, USA. His research interests lie in development economics and environmental economics. As a graduate student, he wrote his Master's thesis on "The Relationship between Child Labour and Microfinance: Evidence from Rural Bangladesh." He has co-edited a research study entitled "Climate Change and Food Security in South Asia."

**Marthe Hårvik Austgulen** is Master of Philosophy in Political Science from the University of Oslo, 2010, with the thesis “Climate Negotiations in Copenhagen: USA’s Significance Analysed”. She has a Bachelor’s Degree from the University of Bergen, and has taken parts of her degrees at Fudan University in Shanghai, MGIMO University in Moscow, and Free University of Berlin. Austgulen has been employed as Research Fellow at the National Institute for Consumer Research (SIFO) since 2011.

**Simi T. Balakrishnan**, a postgraduate in Law from Cochin University of Science and Technology, India, is currently an Assistant Policy Analyst with CUTS International. Her area of interest includes: Trade Law, Environment law and Consumer Law. With a professional stint of over eight years with CUTS, she has experience in working on projects related to trade and environment and WTO issues from South Asian perspective. She has published various research papers and articles, besides being a regular speaker at international and national conferences on these issues.

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I thank my colleagues at CUTS Centre for International Trade, Economics & Environment. With assistance from Renu Beniwal, Archana Jatkar directed and coordinated its implementation. The desk research was done by Simi T Balakrishnan and Manbar Khadka of CUTS and Eivind Sto and Marthe H Augustelen of SIFO. Taking inputs from all project-related activities including capacity building programme and with support from Archana Jatkar and Simi T Balakrishnan, Manbar Khadka was the lead author of this publication.

Manjula Lal did the editing of this publication, and Madhuri Vasnani and Mukesh Tyagi of CUTS did its proof-reading and lay-outing. I thank them and Arun Talwar, G. C. Jain and L. N. Sharma for financial management of the project.

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Finally, any error that may have remained is solely ours.

**Bipul Chatterjee**

Deputy Executive Director, CUTS International &  
Head, CUTS Centre for International Trade, Economics & Environment

# Foreword

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India and Norway enjoy a long standing and strong partnership, one we highly appreciate on the Norwegian side. Both countries share the view that increased economic cooperation and international trade will greatly benefit the world economy and all countries taking part in such economic integration – as long as the terms, rules and regulations that govern trade are balanced and appropriate.

We believe that non-discrimination and equal treatment of similar products ensured by principles of ‘most-favoured-nation’ and ‘national treatment’ will lead to fair competition and welfare gains from specialised production based on comparative advantage.

These convictions we share with all member states who take part in the multilateral trading system, most prominently expressed by the Marrakesh Agreement of April 15, 1994, establishing the World Trade Organisation (WTO).

We also recognise that open markets and international trade will have costs, not only benefits for all. We thus acknowledge that trade policy should be subject to public scrutiny and choice. The competence and voice of civil society is indispensable to ensure that these choices are made by consumers well informed, with the right facts.

One of the world’s most prominent and respected civil society organisations within the field of trade policy is Consumer Unity & Trust Society (CUTS), based in Jaipur, the capital of Rajasthan in India.

As an Ambassador of Norway to India, I am pleased and proud of our long standing and fruitful cooperation with CUTS. Their work, including with Norwegian partners, have contributed greatly to our ability to make informed decisions with regard to economic policy and trade.

I believe the product you are holding in your hands, demonstrates that CUTS and their partners are doing pioneering work. That they have addressed one of the most important – and controversial – issues in the international discourse on trade policy for the past decades; the question of environmental standards and their impact on trade.

The case in point, the Indian Textiles and Clothing Sector, is particularly important, as this sector represents a great, yet untapped potential for India to improve its competitiveness and create decent work and economic progress for millions of underemployed men and women in this great nation.

It is, therefore, particularly encouraging to read one of the main findings of the study; that better compliance with environmental standards will reduce uncertainty in market access and enhance market access per se for niche products.

As such, this study will help us make more informed decisions in trade policy by removing the notion that environmental standards are incompatible with development-friendly trade policy. As the study shows, if properly introduced and adopted, environmental standards can promote sustainable trade and development. I find that a very promising message!

**Eivind Homme**

Ambassador of Norway to India

# Preface

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Eco-label is a market-based mechanism designed to provide information about product externalities to consumers and give a market incentive to producers to make environmentally and socially beneficial products. Its ultimate aim is to ensure net environmental improvement along the life cycle of products. In a number of countries, it has been effectively used as a product information policy tool to tackle unsustainable consumption and production patterns. Realising its importance, India too launched its own national eco-labelling scheme in the year 1991.

To some degree, such labels support each other as they cover different dimensions of sustainability. However, there is also a competition among them, and to keep up in this race an array of stringent environmental conditions are developed by the developed world from time to time. Such constant changes in requirements imposed largely by them are posing barriers to developing countries' exports. This is especially relevant in the perspective of world trade.

An analyses of trade impact of eco-labelling by various experts in recent times have shown differing results. Studies do admit that there is a potential of trade effects. But there are also claims that eco-labelling schemes can facilitate market access for developing countries. Properly designed and implemented eco-labelling schemes encourage and expand trade volume and stimulate domestic development in line with local and national environmental net gains.

CUTS has been at the forefront of promoting sustainable consumption and production behaviour among industry, authorities and consumers across the country and the globe. It is from such a backdrop that CUTS initiated the project '*A Study of Environmental Standards and their Trade Impacts: The Case of India (SESTI Project)*' that aims to promote appropriate and optimal use of eco-labels as a means for enhancing environmental sustainability, consumer welfare in the North and producer welfare in the South. CUTS implemented this project in cooperation with the Norwegian Institute for Consumer Research (SIFO) with support from the Norwegian Ministry of Foreign Affairs, through the Royal Norwegian Embassy, New Delhi.

Given its vast scope, the study was restricted to the textiles and clothing (T&C) sector as it plays a very significant role in India in terms of foreign exchange earnings and employment. Moreover, with the dismantling of quotas in 2004 under mandate from the Agreement in Textiles and Clothing of the WTO, the focus has now clearly shifted to the future of the Indian T&C exports.

Hence efforts were taken to determine the degree to which environmental and social labels function or can potentially function as a communicative tool in the European consumer market, as well as identify the costs and benefits associated with the use of such labels along the value chain of textile production and consumption in India and Europe.

Through field research both in India and selected European countries, CUTS with help of SIFO took an initiative to ascertain stakeholder perceptions regarding net welfare benefits from such standards or labels, and thereby recommend changes in associated systems of governance to augment such net welfare levels.

Some of the major findings from the field are: T&C manufacturers are aware of environmental standards, but they lag behind in acquiring certification of environmental standards. The sector needs to acquire certification for greater penetration in the international market. Moreover, the results show that compliance with environmental standards positively impact the trade of T&C sector. This finding can be one of the principal guidelines to advance the optimal use of eco-labels, thereby enhancing environmental sustainability, consumer welfare in the North, and producer profitability in the South.

I hope that through this study, we are successful to some extent in generating a better understanding of how standards and quality attributes related to environmental concerns in the T&C sector are defined, developed and managed both in the Northern and Southern hemisphere.

Finally, let me thank Ministry of Foreign Affairs, Norway for its generous support to this project and I thank the Royal Norwegian Embassy in New Delhi for its involvement in this work.

I look forward to further strengthening this rewarding partnership in on going and future works. Also, I thank my friends at SIFO and colleagues at CUTS who worked on this project. I hope it will be widely disseminated and generate interest amongst all relevant stakeholders.

**Pradeep S Mehta**  
Secretary General  
CUTS International

# Executive Summary

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## The Project

With support from the Norwegian Ministry of Foreign Affairs through the Royal Norwegian Embassy, New Delhi, and in partnership with National Institute for Consumer Research (SIFO), CUTS International implemented a project entitled “A Study on Environmental Standards and its Trade Impact on Indian Textiles and Clothing Sector” (SESTI).

The objective of the project is to promote dialogue on environmental standards and labels between producers in the South and consumers in the North, especially those associated with India and Europe; generate estimates and ascertain stakeholder perceptions of net welfare benefits from such standards/labels; and thereby recommend changes in associated systems of governance to augment such net welfare levels. Given its vast scope, this study is restricted to the T&C sector.

In line with the above-mentioned objective, desk research (literature review, data analysis, etc.) were conducted on the discourse on green consumption as well as the evolution of governance systems resulting in the enhanced use of standards to understand how the use of environmental labels has become more popular over time.

Likewise, three surveys were conducted. One was an Internet survey of consumer organisations and households in select European country markets to understand and evaluate socio-cultural-political regimes and related barriers generated by the mentioned standards. Another one was conducted in Europe on retailers and importers in the T&C sector to identify the economic costs of implementing environmental standards and the benefits from marketing labeled products. The third one was conducted on a selected number of Indian producers and exports to understand their perception about demand-side factors and also supply-side concerns.

To match up with the research and surveys, five capacity-building programmes were conducted to gauge and enhance further understanding on environmental standard and eco-labelling among Indian stakeholders.

The target audiences for these programmes were a cross-section of stakeholders such as manufacturers, exporters, processing units, dye houses, retailers and others in the supply chain of T&C sector from major textile production centres in India, viz., Delhi, Mumbai, Ahmedabad, Tirupur and Ludhiana. These programmes covered a range of issues – from basics of sustainable production and consumption in T&C sector to environmental compliance issues to trade impacts of environmental standards on Indian T&C. Prominent eco-labels popular with Indian exporters/manufacturers such as GOTS (Global Organic Textile Standard), EU Flower and Oeko-Tex 100 were discussed.

## **Key Findings**

### ***A. Producer Survey***

The survey findings shed light upon range of issues associated with T&C sector in India. One of the major finding of the project is that better compliance with environmental standards reduces uncertainty in market access and enhances market access per se for niche products. The T& C sector faces competition from major cotton-producing countries like Bangladesh and China. Findings also show that Indian T&C manufacturers are aware of foreign environmental standards, but they lack the needed capital for greening their technologies. In other words, the cost of eco-compliance is simply too high for them, particularly for small and medium enterprises (SMEs). At present, the level of acquiring certification is low among Indian T&C firms. Nonetheless, there is a persisting desire among Indian T&C manufacturers to penetrate the European market by complying with relevant environmental standards.

Since the EU is one of the major destinations for Indian T&C products, a number of surveyed firms have complied with REACH – European European community regulation on chemicals and their safe use. Besides REACH, the other environmental standards complied with by Indian T&C firms are ISO 14001, GOTS, Oeko-Tex, and Social Accountability (SA-8000), among others.

Compliance with environmental standards positively impacts trade in the T&C sector. This finding can be one of the principal guidelines to advance the optimal use of eco-labels, thereby enhancing environmental sustainability, consumer welfare in the North, and producer profitability in the South. However, findings also confirm that Indian T&C products have faced increased import duty and T&C firms have suffered from global financial crisis, thereby affecting the export potential of the Indian T&C sector.

### ***B. Stakeholder Survey***

The stakeholder interviews revealed that there seem to be a sound agreement among the stakeholders in Norway that the T&C industry are facing severe environmental challenges. However, compared with other consumption areas such as food, paper and household appliances, the environmental understanding of the negative impact of textile and clothes production is limited and has been given limited attention. A prominent challenge for the greening of the textile industry is the uncertainty regarding who should take the responsibility for developing and implementing global environmental standards for textiles. The increased awareness has not yet been manifested into promising actions and central actors have been surprisingly passive

Complying with the REACH regulation, the Norwegian government bans production of T&C materials that contain the most dangerous chemicals. However, the Norwegian Ministry of Environment cannot regulate the production processes in developing countries. Thus, a government promotes solution to environmental challenges in the textile industry is use of labelling schemes, where the Norwegian government is inclined towards promoting its official eco-labelling schemes, the Nordic Swan and the EU-Flower.

In Norway all stakeholders are pointing at the crucial role of consumers in the market for sustainable clothing. There is an agreement that the pressure from the consumers is lacking, and that it really will make a difference if consumers acts upon their responsibility. There are, however, disagreements about the potential impact of such pressure,, but consumers' practices in other sectors have shown the potentials.

One conclusion from the stakeholder interviews is that Indian producers have to prepare themselves for new environmental standards and labelling regimes. The reason for this conclusion is that the large global textile players are taking initiatives to enhance the environmental standards in their supply chain. This is done despite of the lack of pressure from other stakeholders and consumer demand. This might be a way to prepare themselves for future stakeholder pressure and a way to avoid stricter regulating regimes.

### ***C. Consumer Survey***

Findings from the consumer survey demonstrate significant variation in the consumers' awareness about the relevant labels for textiles and a significant variation in the consumers' attitudes and practices related to eco-labelling of textiles. A large share of the respondents agree that eco-

labelling schemes help them make better choices while shopping and that they trust the information presented to them by the eco-labels. While the respondents are more aware of their respective national eco-labelling schemes, they are less aware of regional eco-labels such as the EU-Flower and international eco-labels such as GOTS and Oeko-Tex. The results also show that very few respondents have seen the relevant eco-labels on textiles, demonstrating that the current use of eco-labels on textiles is limited. The respondents from Norway seem to be the least knowledgeable about the global labels, while German respondents seem to be the most knowledgeable. This indicates differences within the European market for eco-labelled textiles.

With regard to the stated environmental concerns while buying clothes, the sensitivities differ from country to country. The Norwegian respondents state to be the least concerned about the environment when buying clothes when compared to respondents from Germany, France, Sweden and England.

However, despite of the limited awareness of especially global eco-labels and the varying stated environmental concerns, approximately 50 percent of the respondents in all countries agree to a statement claiming that they have a responsibility as consumers to buy environmentally friendly products. This indicates that there is a market for eco-labelled products in all countries studied.

#### *D. Capacity-building programmes*

The interactive programmes reconfirmed that the two key driving factors for textile and garments companies for adopting environmental standards and various eco-labelling schemes are: better acceptance of products in the international market and consumer recognition and demand. The majority of interviewed stakeholders in the programmes and in the producer survey (1/3<sup>rd</sup>) have ranked 'Better acceptance of product in the international market' as the most important reason for subscribing to environmental standards.

The stakeholders in these programmes, held across major textile production centres in India, have expressed their concern about proliferation of eco-labels and how difficult it is from producer as well as consumer perspectives. There was a general demand of harmonisation of eco-labels so that there are fewer hassles at the factory level for implementation and compliance. A majority of stakeholders felt that the plethora of eco-labels in the market – each having its own standard & criteria – is actually inhibiting them from assimilating the labels in their working.

It is argued that harmonisation and mutual recognition of different eco-labels would be beneficial for all stakeholders. The programmes clearly showed that there is a need to rationalise the existence of different eco-labels and emphasis was made to harmonise them to a single common denominator or at least a single eco-label for a particular region/sector so that compliance becomes simple.

Another important point that emerged was the need to develop some incentive-based mechanism to enhance and encourage eco-compliance in the sector.

## **Learning**

### *Research*

Given the patchy nature of data, there have not been any substantial empirical studies' examining the real impact of eco-labels on trade in the T&C sector. So far, theoretical arguments have been made regarding the potential negative effects of eco-labels. As such, it would be of substantial contribution to the existing research if an empirical study can be done analysing the effect of eco-labelling on trade flows.

### *Advocacy*

- Eco-labelling schemes such as the EU Flower, GOTS and others must extend their reach among producers, retailers and consumers in developing countries.
- There is a need to create greater awareness among Indian consumers regarding potential benefits emanating from the use of eco-labeled products and to develop incentive mechanisms to encourage eco-compliance in the sector.
- Indian T&C firms must be provided with capacity-building training programmes on adopting foreign environmental standards.

### *Networking*

- With the existence of a number of eco-labelling schemes, producers are confused. They do not know which environmental standard will allow them greater penetration of the international market. Hence, there is a need to enhance networking activities among these relevant eco-labelling schemes. Global Eco-labelling Network (GEN) is working in this area. However, it needs to focus more on mutual recognition of standards, whereby countries would develop eco-labelling schemes that recognise the differing conditions and

environmental standards of exporting countries; and harmonisation of international labeling standards to facilitate compliance with eco-labelling requirements.

### **Key Messages**

- A clear environmental policy mechanism is the need of the hour. This is indispensable to clear confusion that persists among producers with regard to adoption of environmental standards.
- There is a need for harmonising North-South eco-labelling schemes so as to bolster net welfare gains in both regions. However, this might represent a problem in the consumer market because the national labels are well known and trusted among consumers, while the regional and global labels are not to the same degree recognised and identified by the consumer.
- The respective government must play an active role in promoting environmental sustainability across the T&C supply chain.
- Indian T&C firms have expertise in producing specific items such as men's T-shirts, carpets, textile floor coverings, babies' garments and clothing accessories, among others. These items are in great demand in the Western world. If Indian T&C firms can address foreign environmental concerns, then there is a huge potentiality of expanding the export base of Indian T&C items across Europe. Hence, there is a greater need for switching to green technology by Indian T&C firms so as to penetrate the European market.
- There must be some sort of facilitation such as accessibility of subsidised credit to SMEs for adopting foreign environmental standards.
- Indian T&C manufacturers must comply with environmental standards not only to penetrate markets abroad but also to protect existing surroundings and the home environment. This way, they will be exhibiting corporate social responsibility.
- Besides adopting environmental standards, Indian T&C manufacturers must equally focus on content and design so as to expand their export destinations across the Western world.
- Developed economies must not hinder the export potentialities of developing economies in the name of non-technical trade barriers. Let free trade prevail for an overall economic prosperity of the region and the world.

# 1

## Introduction

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### **Importance of T&C Sector in the Indian Economy**

From time immemorial, the textile industry has remained an important facet of the Indian economy. It probably dates back to 3000 BC, when mordant dyes and printing blocks were used. India was blessed with a diversity of fibres, and hand looms were used for weaving cloth. Organic dyes were used that were eco-friendly. Indian textiles became famous throughout the world (Chandra, 2006) for finesse, quality, and design (Zala, 2011). During pre-historic times, Indian textiles were exported to China, South-East Asia, and Portugal. Some of the exported items included embroidered bedspreads, wall hangings, and quilts of cotton or jute with wild silk embroidery (Zala, 2011). In fact, the textile industry played a prominent role in the industrial development of India. The manually operated textile looms served as a model for developing the first textile machines in newly industrialised economies (Zala, 2011).

When Britain colonised India, the country became dependent upon T&C manufactured in the Western world. By 1880, India transformed from a leading textile-exporting country to a textile-importing one. But after Independence, textile capabilities were enhanced and the product base was diversified, helping the sector emerge once again as a global player in the international market of T&C products (Chandra, 2006).

At present, the Indian T&C sector holds a significant position in the nation's economy. The sector provides direct employment to more than 35 million people (Ministry of Textiles, 2011-12) and indirect employment to more than 50 million (Tiwari, 2008). T&C contribution to industrial production, GDP, and export earnings stand at 14 percent, 4 percent, and 17 percent respectively. The sector accounts for 26 percent of manufacturing output and 18 percent of industrial employment (Tiwari, 2008).

Previously, the Western world used to be the major exporter of T&C products. But, over time, the production base has shifted from the developed economies to the developing ones for a number of reasons, including labour cost. Table 1.1 depicts a marked differential in labour cost for (T&C) industries across the world.

<b>Labour</b>	<b>Europe Rs/Hour</b>	<b>India Rs/Hour</b>
Skilled workers	750	20.00
Operating personnel	625	12.50
Unskilled workers	500	6.25
<b>Operating hours per annum</b>	<b>6,750</b>	<b>48.75</b>
<i>Source: Textile Industry in Indian Scenario by N. Kavitha</i>		

Moreover, the Indian textile industry has comparative advantages over its competitors for the following reasons:

1. Rich tradition in textiles and historic operation experience
2. Large and increasing internal market
3. Strong raw material base
4. Production along the entire textile value chain
5. More stable and low-risk economy
6. Easy availability of raw materials like cotton, silk, jute, and wool
7. Suitable climatic conditions

Table 1.2 depicts India's competitiveness *vis-à-vis* other countries in the T&C sector.

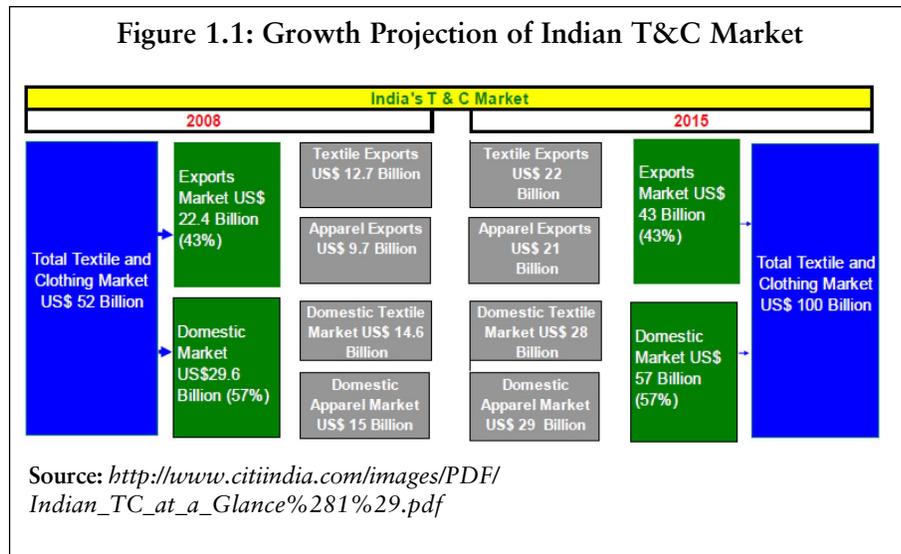
Table 1.2 shows that Indian T&C sector enjoys low cost of production and is vertically integrated. But the sector is not as efficient as China's T&C sector. In order to emerge as the number one exporter of T&C products, the industry needs to upgrade its infrastructure and achieve economies of scale.

Nonetheless, the sector's presence in the international market is quite impressive. It is the second largest producer of raw cotton, cotton yarn, cellulosic fibre and silk. It is the largest producer of jute and the fourth largest producer of synthetic fibre in the world. The share of Indian T&C sector in world trade will inevitably increase, thereby reaching US\$100bn by 2015, where exports and domestic markets will account for US\$43bn and US\$57bn respectively.

**Table 1.2: Key Positive and Negative Aspects in T&C Sector**

Key countries / regions	Key positives	Key negatives
China	Efficient, low cost, vertically integrated	Growth at the cost of profits
India, Pakistan	Vertically integrated, low cost	Lacks economies of scale and infrastructure support
Mexico (NAFTA), Turkey	Proximity to market, duty and quota free	Lack China and India's degree of competitiveness
ASEAN (Vietnam, Cambodia, Indonesia)	Cheap labour	No other cost or location advantage
AGOA (African) countries, Bangladesh	Quota and tariff free, cheap labour	Lacks integration of China and India's degree of competitiveness
Hong Kong, Korea, Taiwan	Trading hubs' proximity to China	No cost advantage, protected currently by quotas
USA and EU	Non-quota barriers likely to prove irritant to imports	US\$400 bn trade loss likely

**Source:** *Industry, I-SEC Research*. Adapted from *Textile Industry in Indian Scenario* by N. Kavitha



### *Export Scenario*

India exports a wide range of T&C products comprising of readymade garments, cotton textiles, handloom textiles, man-made fibre textiles, wool and woollen products, silk, jute, handicrafts and carpets. Approximately two-thirds of Indian T&C products are exported to the US and the EU and the rest to China, UAE, Sri Lanka, Saudi Arabia and others (Ministry of Textiles, 2011-12).

The export volume of India has consistently increased over the years, particularly after the discontinuation of textiles exports quota in 2004 (Ministry of Textiles, 2011-12). Table 1.3 depicts a robust growth in the export of Indian T&C products with an exception in 2008-09. The financial meltdown in the US, Japan, and Western Europe affected the trade of Indian T&C products. And after recession, the export volume has surged impressively. The WTO data (2010) ranks India as the sixth largest exporter of clothing, and the third largest exporter of textiles (Ministry of Textiles, 2011-12).

<b>Fiscal Year</b>	<b>Export Value (USD) in billion</b>
2004-05	14.02
2005-06	17.52
2006-07	19.15
2007-08	22.15
2008-09	21.22
2009-10	22.41
2010-11	26.82
<i>Source: Ministry of Textiles, Annual Report 2011-12</i>	

### *Import Scenario*

The major T&C items that India imports are man-made filaments, impregnated textile fabric, and man-made staple fibre. The total value of T&C imports by India reached US\$4.09bn in 2010-11 (Ministry of Textiles, 2011-12). While the imports of T&C items have increased by 21.69 percent, the sector's share of imports out of total imports has decreased by 0.07 percent in 2010-11 compared to the past year (Ministry of Textiles, 2011-12). India imports various T&C items from China, Taiwan, Republic of Korea and other developing countries.

## **Environmental Standards and Trade in T&C Sector**

T&C sector plays a crucial role in the economic lives of developing countries. For instance, in Cambodia, it contributes 12 percent to the nation's GDP; in Pakistan, its share is approximately 15 percent of the nation's GDP (Keane and Willem, 2008).

It is one of the major sources of foreign exchange in many developing countries. In Cambodia, Bangladesh, Pakistan, and Sri Lanka, T&C exports account for more than 50 percent of total manufacturing exports (Keane and Willem, 2008).

This sector is also one of the major employment providers in many developing countries like Bangladesh and Pakistan. For example, in Bangladesh, it accounts for 75 percent of total employment in the manufacturing sector (Keane and Willem, 2008).

Despite such impressive facts, trade of T&C items has been historically distorted by protectionism and favouritism. The Multi-Fibre Agreement (MFA) from 1974 till 1994 restricted the free flow of T&C items from developing countries to developed ones. The quota system limited imports into the developed countries. Then the Agreement on Textiles and Clothing (ATC) came into force in 1995-2005 that gradually phased out the quota system (Keane and Willem, 2008). But T&C items from developing countries continue to face trade barriers under labour, social, and environmental norms. The EU and US impose higher tariffs for textiles compared to other manufacturing products (Keane and Willem, 2008).

Over the years, environmental trade barriers (ETBs) have emerged as one of the non-tariff measures (NTMs). ETBs not only cover environment but also health and safety of animals and plants (Kumar and Chaturvedi, eds., 2007). As such, textile industries in the developing world have to take into account effluents, pollutants, bio-hazards, chemicals and pesticides that potentially affect health and safety of plants and animals. If environmental standards set by the developed world are not met, then T&C products from the developing world face trade barriers. And to meet such standards, industries require significant funds for upgradation. For example, the Bangladesh shrimp industry requires US\$17.6mn to satisfy EU and US hygiene requirements (Kumar and Chaturvedi, eds., 2007).

The textile industry in Bangladesh is one of the leading manufacturing industries contributing significantly to the nation's economy. Despite being an engine of economic growth, the industry has been heavily polluting the environment. Effluents are discharged into the river basin, thereby contaminating it with alkali, chlorine dye, detergents and others (Kumar and Chaturvedi, eds., 2007). A vast majority of the textile units in

Bangladesh cater to domestic requirements, and so the industries need not meet stringent environmental standards with regard to pollution (Kumar and Chaturvedi, eds., 2007). But environmental degradation is a matter of grave concern for the country and so keeping the rivers clean must be one of the the top priorities of the government of Bangladesh.

The bulk of readymade garments of Bangladesh are exported to the European market. The EU is particularly concerned about the dyes and chemicals used in the manufacture of garments. For instance, Germany bans the use of azo-dyes in apparels and garments. Even though such prohibited chemicals and dyes are not used in readymade garments of Bangladesh, it faces myriad challenges and incurs huge cost in obtaining certification of clearance from abroad as the country does not have testing facilities (Kumar and Chaturvedi, eds., 2007).

Pakistan too has similar issues with its T&C industries. The use of certain azo-dyes containing carcinogenic amines in dyeing of textiles and garments are prohibited in the Western world, to which Pakistan exports substantial amount of its T&C products. Similarly, there are certain pesticides that are banned in the cultivation of cotton, the principal raw material for making yarn used in clothing and textile industries. Textile manufacturers cannot control the use of harmful pesticides in cotton cultivation. This needs to be governed by Pakistan's local and national-level policies. But because of use of such pesticides in cotton cultivation, the textiles and apparel manufactured out of it get banned from entering the European market. And the number of pesticides that are prohibited is increasing with the increase of voluntary eco-labelling schemes (Kumar and Chaturvedi, eds., 2007).

Azo-dyes were extensively used as colouring agents in the Indian T&C sector. With the subsequent ban on azo-dyes by European countries, the government of India banned 112 harmful azo-dyes (Mangalam, 2008). In fact, the use of azo-dyes has been banned in the Indian textile industry since 1997.<sup>1</sup> However, this initiative has proven to be expensive for Indian textile industries. Azo-free dyeing has increased the cost of textile production in India by 15-20 percent (Mangalam, 2008).

### **Impact of Environmental Standards on Indian T&C Sector**

Environmental standards have been initiated to protect the environment. This is reflected in Environmental Product Information Schemes (EPIS) or eco-labels. Eco-labels inform consumers and policy makers about

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1. <http://connection.ebscohost.com/c/articles/12646120/indian-bans-azo-dyes-use-from-june-23,1997>

environmental characteristics of products and services. Eco-labelling began with the introduction of the German Blue Angel in the late 1970s. Third-party eco-labelling schemes came into existence in the late 1980s and 1990s.

The major objectives of eco-labelling schemes are as follows:

- i. Inform consumers about products with fewer adverse environmental impacts
- ii. Push manufacturers to produce environmentally sound products
- iii. Make eco-labelling an instrument of environmental policy.

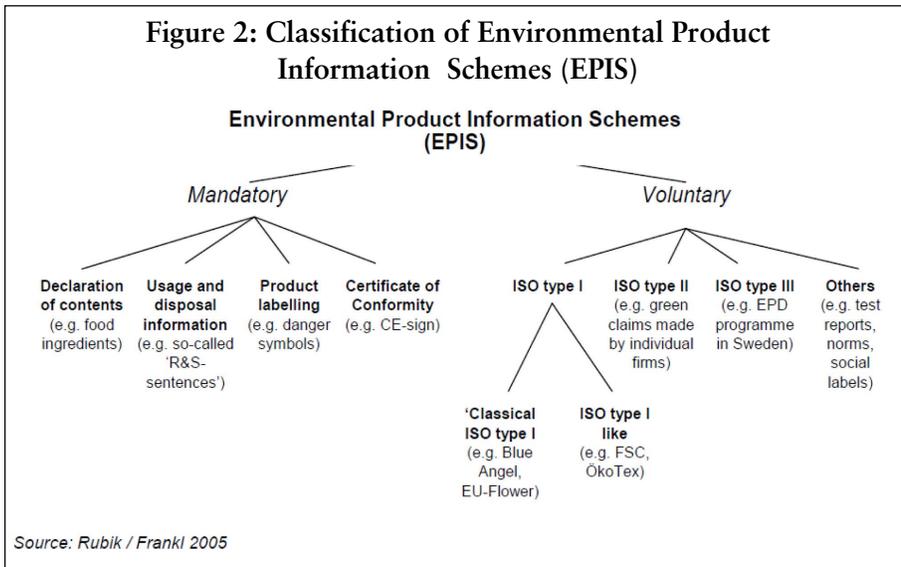
In 1989, the Nordic Council of Ministers established an official Nordic eco-labelling scheme called White Swan. The scheme was initially adopted by Denmark, Finland, Iceland, Norway, and Sweden (Scheer et al., 2008). The product criteria for White Swan are based upon the product's lifespan. The eco-labelling scheme covers paper and household chemicals, among others.

In 1992, the EU eco-labelling scheme also known as EU Flower came into existence. The voluntary eco-labelling scheme was designed for a wide range of daily products. The product criterion for EU Flower is based upon the product's life cycle. The eco-labelling scheme includes textile products, paints, and varnishes and cleaners, among others (Scheer et al., 2008).



Given the fact that the EU is a major market, the adoption of European Type I eco-labels by Indian T&C sector provide an opportunity for the sector not only to suffice the European demand for an environmentally sound product but also to preserve the local environment.

But Stø (2011) argues that over the years, a variety of eco-labels has emerged, which in spite of promoting environmental protection has



resulted in trade barriers to producers and products outside Organisation for Economic Cooperation and Development (OECD). With growing number of eco-labels in OECD countries, Indian T&C sector faces possible technical barriers to trade due to non-compliance to such environmental standards. For example, in 1993, the German textile Industry introduced two eco-labels namely, *Markenzeichen Schastoffgeprufth Textilien* (MST) that focused on lower content of pollutants and *Markenzeichen Unweltschonede Textilien* (MUT) that focused on norms for production process (Kumar and Chaturvedi, eds., 2007). Germany of late has introduced Eco-Tex Standard 100 that lists out criteria to examine whether textile has been produced taking into account environmental consideration or not (Kumar and Chaturvedi, eds., 2007).

Table 1.4 shows that the textile industry poses a serious threat to the eco-system. Nonetheless, it is the sector that is extremely important from the viewpoint of foreign exchange earnings and employment generation in developing economies like Pakistan.

While there are state-sponsored eco-labelling schemes, non-governmental organisations (NGOs) too have introduced eco-labelling schemes on a voluntary basis. One such example is the Nordic Swan. Gandhi (2006) writes that non-state actors or NGOs have varied interests in designing voluntary eco-labels. Their interests can be influenced by industry groups, manufacturing associations and non-profit environmental activists. The standards they set are not scrutinised and their transparency and accountability are not examined. And yet they play an influential role in guiding consumers about the environmental standards in textiles, leather

Components	Sector					
	Textile	Leather	Carpets	Sports Goods	Surgical Instruments	Fish
Environmental Impact	5	5	4	1	1	2
Pollution Charges	4	5	4	0	1	0
Export Potential	5	2	3	3	4	2
Employment	5	3	2	2	2	NA
Total	19	15	13	6	9	4
<b>Ranking by Importance</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>4</b>	<b>6</b>
<b>Note:</b> Score (5=very high, 4=high, 3=middle, 2=low, 1=very low, 0=none)						
<b>Source:</b> <i>Census of manufacturing industries 1990-91, Federal Bureau of Statistics, Government of Pakistan, Kumar and Chaturvedi, eds., 2007</i>						

and other goods (Gandhi, 2006). India has officially protested at the WTO Committee on Trade and Environment (CTE) against the voluntary eco-labels that restrict Indian T&C items from entering the EU market. These labels are unfair as they could favour their own producers and are based on disguised restrictions on trade (Gandhi, 2006). Moreover, given the fact that majority of Indian T&C exporters consist of small and medium enterprises (SMEs), they simply cannot afford to comply with NGO environmental standards because of high cost of compliance. And if they fail to comply with standards, Indian T&C articles face barriers to trade.

Indian T&C sector faces 14 types of non-tariff measures and accounts for 16.5 percent of the total NTM cases.

The sector faces non-tariff measures in the name of labour, environment, minimum import price, customs, and rules of origin. EU, USA and Mexico impose the maximum number of restrictions on Indian T&C (Saini, 2009). Even giant retail stores in the US like Wal Mart and JC Penny impose restrictions on the ground of labour norms and environmental protection.

### Significance of the Study

With an objective to promote the optimal use of eco-labels so as to enhance environmental sustainability, consumer welfare in the North, and producer profitability in the South, CUTS International conducted this study with the support from the Norwegian Ministry of Foreign

Table 1.5: Various Non-Tariff Measures faced by Indian T&C Sector			
NTM Types	Countries	NTM Types	Countries
Antidumping	Turkey	Minimum Import Price	Argentina, Brazil, Colombia, EC
Certification	Colombia, Ukraine	Standards	Japan
Customs	Chile, EC, Mexico, US	Subsidy	Bangladesh
Environmental	EC	Rules of Origin	Mexico, US
Documentation	Mexico, US	Labour	EC
Import Restriction	Nigeria, Colombia	MFN	Pakistan
Labeling	Japan, Korea, Mexico, US	SPS	Japan
<b>Source:</b> Ministry of Commerce and Industry, Govt. of India, 2009			

Affairs. The study particularly aims to ascertain trade impacts of eco-labelling on the Indian T&C sector, thereby recommending policy suggestions on environmental standards to bolster net welfare of stakeholders.

Three surveys are conducted under the study. The first one is producers' survey done in selected T&C production centres across India. The survey provides perception about demand-side constraints in European countries for eco-labeled T&C products from India. It also provides insights into supply-side constraints from Indian T&C manufacturers. The second one is stakeholders' survey done in Norway. It provides an insight into the institutional set-up and related matters in Norway to address market access issues in eco-labeled T&C products from developing countries like India. And the third one is consumer survey done in selected European countries. It estimates the future demand for eco-labeled T&C products across Europe.

### Brief Outline of the Report

Chapter 2 deals with the economics of eco-labelling and other technical barriers to trade in the T&C sector. It focuses on the history of eco-labelling and producer behaviour in the context of eco-labelling. Furthermore, it sheds light upon international good practices on implementation of eco-labelling in T&C sector.

Chapter 3 is about European eco-labelling and trade in the T&C sector. It focuses on various types of eco-labelling programmes, the governance of eco-labelling schemes and challenges therein among selected European

countries. It sheds light upon the relationship between technical barriers to trade (TBT) and the Indian T&C sector. It further delves into eco-compliance challenges and harmonisation of eco-labelling schemes.

Chapter 4 deals with the analysis of three survey results. It presents findings from a producer survey done in India, stakeholder survey done in Norway and consumer survey done across select European countries.

Chapter 5 has concluding remarks and the way forward. It outlines the major findings from the study and summarises the results of various surveys conducted under the study. It provides recommendations with regard to changes in associated systems of governance to augment net welfare benefits to stakeholders across the world.



## 2 Eco-labelling and Technical Barriers to Trade

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This chapter deals with historical evolution of eco-labelling, producer behaviour in the context of eco-labelling, relationship between international trade and eco-labelling, and international good practices in promoting environmental sustainability in T&C sector.

### Historical Evolution of Eco-Labelling

The concept of eco-labelling has evolved from a thought process. Initially, producers declared their product's content, country of origin, and health concerns related with the product's usage or consumption. But over time, the need for declaration of products' environmental impact has emerged with the growing concern for environmental protection (Williams, 2004).

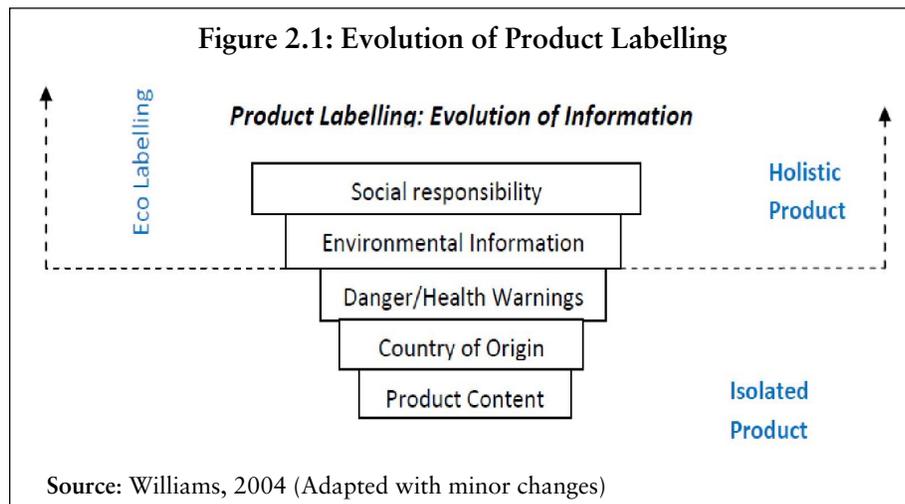


Figure 2.1 shows that a gradual shift towards environmental issues has emerged in product labelling. The concept of environmental information and social responsibility has evolved which has led to the formulation of eco-labels/environmental standards.

Identifying a niche for eco-friendly products, producers/manufacturers especially in developed economies began labelling their products as 'eco-friendly', 'ozone-friendly', and 'biodegradable'. Without independent verification, such self-declared claims did not constitute any formal basis. Rather they tend to capitalise on environmental consciousness of consumers. Unfortunately, such claims devoid of third-party verification created confusion among consumers across the globe (SBA, 2006).

Hence, in order to address issues related with 'self-declared claims', both public and private sectors initiated third-party labelling verifications. Such initiations have resulted in the creation of various eco-labelling schemes such as Blue Angel, Nordic Swan, and Oeko-Tex, among others.

The first-ever eco-label to be introduced was the Blue Angel by Germany in 1978. It is an independent third-party verification programme and is a public and voluntary eco-labelling scheme. The scheme was a huge success in Germany and its model was replicated in other parts of the world. Subsequently, a series of eco-labelling schemes like the Nordic Swan (1989) in Norway, Ecomark (1991) in India, EU Flower (1992) in Europe emerged over the years.

Moreover, with a vision to improve, promote, and develop the eco-labelling of products and services, the Global Eco-labelling Network (GEN), a non-profit third-party association was founded in 1994.<sup>1</sup> The most detailed information on eco-labelling emerged in the Global Eco-labelling Network's "A Guide to Eco-labelling Around the World". *'The guide defines eco-labelling as a label which identifies overall environmental preference of a product or service within a particular product/service category based on life cycle considerations'* (GEN Eco-labelling Guide 1999:1, in Williams, 2004).

The need for environmental protection was slowly felt by governments, businesses and general public across the globe. Consequently, the UN Conference on Environment and Development in 1992 addressed eco-labelling as one of its priority areas. The need for eco-labelling was further bolstered by the Johannesburg Plan of Implementation, concluded at the World Summit on Sustainable Development in 2002 (SBA, 2006).

But an important point to ponder upon is whether or not eco-labels are the only means of conveying the message to consumers that products

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1. [www.globalecolabelling.net](http://www.globalecolabelling.net)

are environmentally safe. Given the concerns that eco-labels have emerged as new technical barriers to trade, are there other less trade-restrictive ways of conveying this very message? (UNEP, n.d.)

### **Producer Behaviour in the Context of Eco-Labeling**

Who benefits from the adoption of environmental standards? Is it the consumers? The producers? The retailers? When considering the social aspect of eco-labelling, the society benefits as a whole. But when considering the monetary aspect of eco-labelling, producers benefit in some instances, and retailers benefit from increased product mark-up in other instances (UNEP, n.d.). This is why we often hear giant retailers supporting different eco-labels with their vested interest of increasing profits via product mark-up. For producers, the perceived monetary benefits will play a crucial role in influencing them towards adopting environmental standards.

Studies show that producers are inclined towards adopting environmental standards. After all, adoption of environmental standards facilitates access of goods to international market. Moreover, the concept of green consumerism has already evolved in developed economies and this concept is gaining ground in developing economies as well. So, there is a preference for green goods and this preference is getting more prominent throughout the world. Therefore, it becomes an added advantage for producers if their products are eco-labelled. But since eco-labelling is entirely a voluntary act, producers will benefit immensely if they perceive this instrument as an important tool that improves their situation in the marketplace (SBA, 2006).

But as opposed to normative values, producers in developing countries often perceive eco-labelling programmes as trade distortionary measures. They perceive so for a number of reasons. Some of the major ones are:

- (i) Eco-labelling schemes are usually designed by developed economies taking into account their own environmental priorities and technologies. These may not match with environmental priorities and technologies of developing countries. As such, foreign eco-labelling schemes neglect the accepted methods of production and manufacturing processes in producing countries (Naumann, 2001).
- (ii) Moreover, producers in developing economies face institutional barriers towards adoption of foreign eco-labels. For example, they may face difficulties in acquiring adequate supplies of materials and environment-friendly technologies (Naumann, 2001).

In order for eco-labelling programmes to be successful, there is a need for generating awareness among industry and commercial sectors as well as garnering support from both private and public sectors. There is a greater need for initiating dialogue among concerned stakeholders.

Producers must be made aware that environment-friendly products are the need of the hour. And there must be some sort of governmental support in bolstering this effort. The government must support producers in acquiring environmental certifications, because many domestic firms simply do not have the required technical capabilities and the needed finances for adopting foreign environmental standards.

### International Trade and Eco-Labelling

In the absence of rich dataset, the real impact of environmental standards on international trade has not been quantified yet. At present, the impact of eco-labels on international trade flows is based upon theoretical arguments.

Apart from environmental standards, a number of variables such as consumer preferences, production levels and so forth influence trade flows. It therefore becomes difficult to particularly isolate and examine the effect of one variable, say, eco-label, on trade flows from a group of other influencing variables (UNEP, n.d.).

Whether eco-labelling schemes come under technical barriers to trade (TBT) or not has been a seriously contended issue in WTO forums. WTO has accepted eco-labelling as an environmental policy tool in its preamble on TBT. *'The Agreement on TBT tries to ensure that regulations, standards, testing and certification procedures do not create unnecessary obstacles, while also providing members with the right to implement measures to achieve legitimate policy objectives, such as the protection of human health and safety, or the environment.'*<sup>2</sup> But there exist some serious issues with eco-labelling and international trade. Some of the major ones are:

- (i) *Process and production methods*: WTO mandates that importing countries have every right to ensure that products entering their markets are free of hazardous substances and are environmentally safe. But eco-labelling standards, such as Blue Angel and Nordic Swan certify products based upon environmental impacts emanating from their life cycle processes. In other words, they certify that the products' entire processes and production methods are environmentally

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2. [http://www.wto.org/english/tratop\\_e/tbt\\_e/tbt\\_e.htm](http://www.wto.org/english/tratop_e/tbt_e/tbt_e.htm)

sustainable. This very notion violates WTO's TBT agreement, which does not allow differentiating products based on intangible characteristics like production processes per se (Williams, 2004).

- (ii) *Non-discrimination*: WTO promotes multilateral trading systems for the attainment of economic welfare across the globe. And non-discrimination is one of the main principles of multi-lateral trading system (Williams, 2004). But in recent years, environmental policies have been used either directly or indirectly, thereby distorting international trade. This is against the principles of WTO.

Proponents of environmental policies argue that if environmental concerns are not addressed, then there will be an influx of inferior goods produced using outdated technologies. Consequently, pollution levels will increase, thus deteriorating natural environment (Williams, 2004).

With the adoption of environmental standards, the T&C sector will no longer face environment-related trade barriers. This has been proven from some experiences of developing economies. When the same environmental standards are adopted throughout the world, distortionary trade does not happen in the name of environmental protection. This is the formal argument for eco-labels by developed economies.

Moreover, firms will upgrade their existing level of technologies by adopting foreign environmental standards. And this is essential for firms to maintain their businesses in today's cut-throat competitive market. For example, in Tunisia, T&C firms with newer technology were found to be more efficient than those with older technology. Likewise, exporting firms were found to be more productive and efficient than non-exporting ones. Those with older technologies and inefficient ones eventually get replaced by efficient ones that employ latest technologies complying with environmental standards.

### **International Good Practices**

Good practices must come up not just from producers and consumers but also from retailers like Wal Mart, H&M and Inditex. In fact, the giant retailers have a strong say in greening the entire product line. They can push their suppliers for greening their technologies and supplying environmentally sound products. They can signal their suppliers regarding the niche for green products, following which, producers will act accordingly.

For example, Wal Mart has introduced its own scorecard to measure the sustainability of products. Its textile scorecard measures environmental

sustainability along the entire supply chain. Similarly, H&M has supported the use of organic cotton in textile production (UNEP, 2011).

Bulgarian T&C sector is another example of international good practices. The T&C sector in Bulgaria has complied '*with the regulations given in Regulation (EC) 1980/2000 of the European Parliament and Council of the European Union on July 17, 2000*'.<sup>3</sup> The sector ensures that obsolete technologies are replaced with modern ones and principally adopts the following guidelines:

- Efficient use of resources for the production of textile raw materials
- Effective monitoring and controlling of production quality
- Treatment of waste water
- Replacement of older technologies with the latest ones

Source: Good Practices in Textile and Clothing Industry in Bulgaria. <http://www.texeastile.eu/statistics-research/good-practices-textile-and-clothing-industry-bulgaria-prepared-uctm-sofia>

## Concluding Remarks

The concept of eco-labelling via third party verification is indeed a noble course towards environmental protection. But, there are positive and negative aspects of eco-labelling schemes. While capitalising on positive aspects of eco-labelling schemes, the negative aspects must be addressed for making them more prominent in international arena.

Given the patchy nature of data, it is hard to pinpoint the real effects of eco-labelling on international trade flows. Nevertheless, there are both positive and negative impacts of eco-labelling on trade. While eco-labelling will facilitate market access, and promote greater environmental protection, the failure to comply with specific environmental standards will prohibit market access, thereby limiting the business prospects of industries and SMEs in developing economies.

And finally, whatever be the disputes, eco-labelling scheme must not be used as a trade distortionary measure. In order to protect domestic products from an influx of cheap foreign products, a country must not put forth certain stringent environmental regulations that may be irrelevant in a producing country. Such issues must be rightfully tackled by the

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3. <http://www.texeastile.eu/statistics-research/good-practices-textile-and-clothing-industry-bulgaria-prepared-uctm-sofia>

concerned bodies of the WTO. There must be a balance between trade and environmental policies for a sustainable development and growth (UNEP, n.d.). One policy mechanism cannot and must not be pursued at the expense of other mechanism.



# 3

## European Eco-labelling Schemes and Trade in T&C Sector

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### Why Adopt Eco-labels?

A sustainable use of natural resources is indispensable for environmental protection. The same holds true for production processes as well. If products are manufactured following a certain set of environmental standards, then they have minimum environmental impact. In the case of the T&C sector, there is an environmental impact right from cradle to grave. Cotton production requires huge amounts of water and pesticides. Cotton fabrics 'have their biggest impacts during manufacturing due to the processes of dyeing, printing, bleaching and finishing' (The European Commission). Hence, sustainable ways of producing T&C materials are of utmost importance for environmental protection.

### Background on Eco-labels

With increased environmental consciousness in the western world, green consumerism emerged and subsequently manufacturers began touting their products as environmentally safe. Manufacturers and retailers began labelling their products as 'eco-friendly', 'recyclable', and 'ozone-friendly' to boost their sales (Nimon and Beghin, 1999). Since then emerged the concept of third-party certification via eco-labels (Nimon and Beghin, 1999).

Eco-label or environmental label provides information to consumers about environmental aspects of products. It informs consumers that the products have been developed, designed, and packaged in an environment-friendly manner, and so will have less environmental impact upon the eco-system. Since this concept largely emerged in industrialised countries, eco-labels are mainly concentrated in the developed world. But over time, environmental consciousness has emerged in developing countries as well,

and consumers are gradually demanding eco-labeled products. Moreover, because of trade with the developed world, the developing world has begun pushing for institutionalising eco-labelling schemes and promoting eco-labeled products (Naumann, 2001).

Table 3.1 depicts main types of eco-labelling programmes in practice across the globe.

Table 3.1: Types of Eco-labelling Programmes		
Type of Programme	Private and Voluntary	Public and Voluntary
Self-Declaration Claims	Ozone-friendly, recyclable	Ozone-friendly, recyclable
Independent Third-Party Verifications	Oeko-Tex, US Green Seal	EU eco-label, Nordic Swan, Blue Angel
Source: Naumann, 2001		

*Self-Declaration Claims:* Such claims are made independently by manufacturers or retailers of the product based upon a single attribute or an overall assessment of the product (Naumann, 2001). Products are labeled as ‘eco-friendly’, ‘environmentally-friendly’, ‘ozone-friendly’ and ‘recyclable’, among others. These claims are self-proclaimed and are not verified by an independent third party.

*Independent Third-Party Claims:* Such claims are based upon compliance of certain eco-labelling criteria usually verified by a competent body such as a government-sponsored body (Naumann, 2001). The certification is awarded based upon analysis of the product’s environmental impact throughout its life cycle (Naumann, 2001). Examples of such third-party claims are Oeko-Tex, US Green Seal, Blue Angel, Nordic Swan and EU Flower, among others.

In order to promote environmental sustainability of business, the International Organisation for Standardisation (ISO) has adopted eco-labelling and introduced ISO 14000 series of environmental standards and ISO 14020 series on environmental labels and declarations (Naumann, 2001). Under ISO, eco-labels are categorised into two types:

*Type I:* These are voluntary, multiple criteria based and independent third-party verified eco-labelling schemes. Some of type I eco-labelling schemes are the EU Flower (European Union Eco-label), the Nordic Swan (Nordic countries), Green Seal (US), the Blue Angel (Germany) and Environmental Choice (Canada) (Naumann, 2001).

*Type II:* These are self-claimed environmental labels proclaimed by the manufacturers, importers, distributors or even retailers. These claims do not have independent third-party verifications and so lack credibility in the market. Some of type II environmental labels are environmentally-friendly, ozone-friendly, biodegradable, recyclable and ozone-friendly, among others (Naumann, 2001).

The Table 3.2 depicts national eco-labelling schemes in various countries.

Table 3.2: National Eco-labelling Schemes		
Country/ Group	Eco-labelling Programmes	Date of Creation
Germany	Blue Angel	1977
Canada	Environmental Choice Programme	1988
Japan	Eco Mark	1989
Nordic Countries	Nordic Swan	1989
United States	Green Seal	1989
Sweden	Good Environmental Choice	1990
India	Ecomark	1991
Austria	Austrian Eco-label	1991
Australia	Environmental Choice	1991
Rep. Of Korea	Ecomark	1992
Singapore	Green Label Singapore	1992
France	NF-Environment	1992
Netherlands	Stichting-Milieukeur	1992
European Union	European Flower	1992
Croatia	Environmentally Friendly	1993
Thailand	Thai Green Label	1994
Source: Naumann, 2001		

### Some Facts on Important Eco-labels

*i. German Blue Angel:* This is the first eco-label launched in the history of environmental labelling. It was launched by Germany in 1978. This eco-label played a role model for the future eco-labels introduced later. German Blue Angel came into existence mainly because of pressure from consumer organisations in Germany on the government for more regulative instruments to prevent negative environmental impacts of products (Landmann, 1998).

The Environmental Label Jury (*Jury Umweltzeichen*), the German Institute for Quality Assurance and Labelling (*RAL, Deutsches Institut für Gütesicherung und Kennzeichnung*), and the Federal Environmental Protection Agency (*Umweltbundesamt*) jointly administer this eco-labelling programme (Kern *et al.*, 2001).

*ii. Nordic Swan:* With the success of German Blue Angel in the late 1980s, the Nordic Council of Ministers introduced the Nordic Swan Label in 1989. This label was initiated mainly to harmonise existing eco-labels in the Nordic countries (Kern *et al.*, 2001).

The Nordic Eco-labelling Board is in charge of setting eco-labelling criteria and selection of new product groups. The board consists of two representatives from eco-labelling standards bodies in each of the member countries (Harrison, 1999). Eco-labelling criteria for the Nordic Swan Label are proposed by technical experts from environmental organisations, public and private sectors.

*iii. Indian Ecomark:* India was the first developing country to introduce its own eco-labelling programme called Ecomark in 1991. India received technical assistance from Germany and Canada in developing and designing this eco-labelling scheme.

Besides having certain elements of both the German and the Canadian eco-labels, the Indian Ecomark also has a unique element in it: applicant's product site must be inspected before awarding Ecomark (Kern *et al.*, 2001).

The Indian Ministry of Environment & Forests manages Ecomark. The selection of product categories and the promotion of labelling is carried out by the inter-ministerial steering committee within the Ministry. And the technical committee in the Central Pollution Control Board determines the specific products to be awarded with eco-labels (Kern *et al.*, 2001).

Ecomark has failed to establish itself as an environmental protection scheme both in domestic and foreign markets. Unfortunately, the only

Ecomark-certified product, detergent, did not hit the market. Both manufacturers and consumers have shown apathy towards Ecomark. Indian manufacturers are disinterested because of the cost involved in applying for the scheme and various regulatory measures they face before being awarded the eco-label (US EPA, 1998).

*iv. Oeko-Tex:* An example of private and voluntary but independent third-party verified eco-labelling scheme is Oeko-Tex. This eco-labelling scheme has been designed especially for T&C products. It is widely used in Germany and Austria and more recently many developing countries, including India and South Africa, have been obtaining this label (Naumann, 2001).

*v. EU Flower:* The European eco-label EU Flower is a voluntary eco-labelling scheme that promotes environmentally sound products across the globe. Its salient features are as follows:

- i. The eco-label is widely accepted in the EU, including Norway, Leichtenstein, and Iceland;
- ii. The scheme calls for product screening by an independent party; and
- iii. It assesses a product's total environmental impact.

Source: The European Eco-label

The EU eco-label is available to:

- i. Manufacturers and service providers
- ii. Importers and
- iii. Retailers with their own environmentally friendly house brands.

In order to apply for the EU eco-labelling scheme, the manufacturer or importer must meet the stipulated environmental standards in the scheme and contact an independent third party: the national eco-label competent body with proofs of such compliance. Then the product can be awarded the EU eco-label (The European Commission, 2001). So far a total of 300 products have entered the market with EU Flower labelling. New products have applied and the number of products with the scheme is increasing every year (The European Commission, 2001). The scheme covers products and services of everyday use with the exception of food, drinks and medicines.

## What Eco-labels Mean for Developing Countries

Eco-labelling schemes initially originated in developed countries. Given the fact that developing countries need to partner with the developed countries for export of T&C products, domestic firms need to comply with foreign environmental standards. And compliance with eco-labelling standards increases the cost of production. While adopting eco-labelling schemes, the T&C sector needs to comply with multiple production standards for dyes, fibres and bleaching chemicals (OECD, 1997).

Table 3.3 depicts some EU standards for eco-labelled T-shirts and bed linen:

Table 3.3: EU Standards for Eco-labelled T-Shirts and Bed Linen		
Maximum amount of metals in pigments and dyestuff	Pigments (PPM)	Dyestuff (PPM)
Arsenic	250	50
Cadmium	50	20
Chromium	100	100
Copper	-	250
Mercury	25	4
Nickel	-	200
Lead	100	100
Zinc	-	1,000
<i>Source: European Commission Directorate General, adopted from Nimon and Beghin, 1999</i>		

*Why foreign eco-labels may potentially act as non-tariff technical trade barriers*

1. Eco-labels are usually designed based on domestic environmental priorities and technologies of the importing country, thus neglecting the traditional and acceptable methods of production in the exporting country.
2. Eco-labelling criteria are usually based upon existing stock of technology in the importing country and such technology may be non-existent in the exporting country. This thus increases the cost of production by complying with environmental standards
3. Environmental infrastructures (waste treatment plants) are well developed in developed countries as opposed to developing countries.

And so compliance with environmental standards will place a higher burden on firms in developing countries

4. There may not be an easy supply of less hazardous inputs (environmentally friendly) in developing countries, thus putting an additional burden for environmental compliance.

As such, development practitioners and environmentalists argue whether to introduce domestic eco-labels or comply with foreign eco-labels. But if a developing country exports bulk of its products to the western world, then it becomes plausible to comply with foreign environmental standards. Because if the developing country introduces its own standards, then it needs to bear additional hurdles such as obtaining reciprocal recognition in a foreign country (Naumann, 2001).

Nonetheless, the main contention has been with the cost of eco-compliance. There are many small and medium T&C enterprises operating across India. For them, an additional cost of eco-compliance is burdensome. This very concern has hindered many T&C firms throughout India in adopting environmental standards.

*Some experiences of developing countries after compliance to environmental standards:*

1. Increase in sales of products
2. Consumers in developed countries are willing to pay higher prices for more environment-friendly products
3. Success of eco-labelling scheme is directly correlated with the level of environmental awareness of the particular country or market
4. Success of eco-labels linked with government procurement
5. A valuable tool for manufacturers to inform consumers about the environmental characteristics of their products

#### ***The Economic Benefits of Eco-labelling***

Yet another research (UNEP, 2005) argues for investigating the economic benefits of eco-labelling. With the adoption of eco-labels, cost of production increases due to transformation in production patterns and use of new technology. Consequently, product prices increase. But price premium is unsustainable in the long run (UNEP, 2005). It is unsustainable for two reasons (UNEP, 2005). First, because of shift in production of eco-labeled products, supply increases, thereby satisfying demand and lowering prices. Second, consumers are unwilling to pay higher prices for eco-labeled products (UNEP, 2005).

Besides price premium, another economic incentive would be a long-term supply contract for suppliers. They may get assurance of access to markets, far more important than a price premium (UNEP, 2005).

With the adoption of clean technology, the environment becomes cleaner and people benefit from a cleaner environment. But interestingly, an important question to ponder upon is who benefits from eco-labelling. Is it the producers or retailers? The report argues that producers who bear the burden of adopting eco-labelling techniques are not the main beneficiaries of such investments (UNEP, 2005). And so the report calls for deeper analysis of this argument.

### **Eco-labelling Schemes: Governance and Challenges**

1. While some eco-labelling schemes like the German Blue Angel and the Nordic Swan have established themselves as reputed and leading eco-labelling standards, others like the Indian Eco Mark have failed to leave an imprint in the labelling economy. One of the main reasons as to why eco-labelling schemes have not been successful is because of issues related to their designing processes. While designing an eco-labelling scheme, the concerned stakeholders' views must be taken into account. While setting eco-labelling criteria and operating and marketing eco-labelling schemes, consumers' voices must be taken into account (Wickerham, 2013).
2. Besides taking into account their considerations, state involvement is also required for building up consumer confidence towards an eco-labelling standard. For instance, Sønderskov and Daugbjerg (2010) examine the state and consumer confidence in eco-labelling schemes across Denmark, Sweden, the UK and the US. Interestingly, they find that consumer confidence towards eco-labelling schemes increases with substantial state involvement in such schemes. And so, they argue for greater governmental involvement in eco-labelling schemes for the promotion of green consumerism (Sønderskov and Daugbjerg, 2010). It is difficult to increase labelling confidence just by relying on non-state actors (Sønderskov and Daugbjerg, 2010).
3. Moreover, for making an eco-labelling scheme efficient and effective, the scheme needs to be supported by other 'policy approaches and instruments' (Wickerham, 2013). Various policy mechanisms like subsidies, tax exemption and reduction are some of the viable instruments for promoting eco-labelling schemes (Wickerham, 2013).

4. In order for environmental standards to flourish and be established, both regulatory and non-regulatory pressures are essential (Wickerham, 2013). There must be a clear environmental policy, trust among stakeholders, consumer awareness on green products and adequate control tools, among others (Wickerham, 2013). Moreover, for an eco-label to be established, it must be relevant in the market and appeal to consumers (Wickerham, 2013).
5. It is practically impossible to conclude as to which eco-labelling scheme will be best suited to a given country. One cannot be certain regarding the eco-labelling standard that will garner significant confidence from people and be famous at both national and regional levels. Therefore, what is more important is taking due consideration of stakeholders' views and consensus while designing eco-labelling schemes. Moreover, delegating environmental governance to industry itself can also lead to better environmental performance; nonetheless, state involvement is imperative for greening the economy (Sønderskov and Daugbjerg, 2010).
6. Yet another study argues for franchising well-known eco-labels to developing countries because not a single eco-labelling scheme has been found to address all concerns related to environmental standards. This is also necessary to facilitate domestic T&C firms in acquiring eco-labelling standards at a reasonable cost (OECD, 2002).

### **Harmonisation of Eco-labelling Schemes**

- a. Nimon and Beghin (1999) mathematically analyse two scenarios with regard to North-South eco-labelling schemes. In the first scenario, Northern textile firms adopt eco-labelling schemes without the participation of Southern textile firms. With the adoption of eco-labelling scheme, Northern consumers now have a variety of products to choose from. They have conventional Northern textiles, conventional Southern textiles, and eco-labeled Northern textiles available in the market. Consumers preferring green goods will lean towards eco-labelled Northern textiles. This therefore hurts both the conventional Northern and Southern textiles. In sum, Northern eco-labelled textiles gain from this approach (Nimon and Beghin, 1999). Whereas in the second scenario, Southern textile firms adopt their own eco-labelling scheme. Here Nimon and Beghin (1999) show that southern eco-labeled textiles regain the lost market at the cost of its conventional

textiles. In aggregate, southern eco-labeled textiles gain while both eco-labeled and conventional Northern textiles lose the market (Nimon and Beghin, 1999).

Hence, Nimon and Beghin (1999) argue that there is always the potentiality of creating a gap between Northern and Southern green textiles. As long as Northern green textiles are better than Southern textiles in quality, consumers prefer Northern green goods. So politically, Northerners may press for non-uniform environmental standards across the trading partners (Nimon and Beghin, 1999). Nonetheless, consumers will benefit if there is an upward international harmonisation of eco-labels leading to higher quality of textiles (Nimon and Beghin, 1999). This will eventually result in competitive environment among Northern eco-labeled textile industries, thereby lowering prices.

- b. In yet another study, Althammer and Dröge (2006) analyse differentiation of consumers' environmental awareness and perception of labelling information with respect to domestic and foreign suppliers. In their model, they analyse two regimes, namely, mutual recognition and harmonisation of North-South labels.

Under mutual recognition, they argue that information problem persists between domestic and foreign labels. They further assume that Northern consumers have little or no information about Southern label, and this therefore creates a home bias. Under mutual recognition, Northern firms gain if Northern consumers have a home bias. But this can be compensated only if Southern firms have cost advantage over Northern products. Hence, Althammer and Dröge (2006) show that if consumers are more environmentally conscious, they would prefer Northern goods to Southern goods as they have limited information about Southern labeled goods. But they end up paying higher prices as Northern goods are costlier than Southern goods. Thus, there is a trade-off between consumers' environmental awareness and prices of goods (Althammer and Dröge, 2006).

Under harmonisation of North-South eco-labels, discrimination towards Southern products will vanish. And market equilibrium will depend upon how firms' costs will be affected by the label (Althammer and Dröge, 2006). So the firm that faces lower cost of production will have a bigger share of market and profit. They further argue that harmonisation at the importing country level will yield an optimal solution for the exporting firm (Althammer and Dröge, 2006).

Besides harmonisation of eco-labels, Althammer and Dröge (2006) argue that if Northern consumers can be well informed about Southern

labels, then home bias will reduce. In order to protect the environment from pollution, there is a need to promote eco-labels. But Northern consumers have limited information about Southern labels and so home bias arises. As such, there is a need for Southern firms to provide information on processes and production methods either through mutual recognition or via harmonisation of labels (Althammer and Dröge, 2006). They stress for harmonisation of North-South eco-labels for the welfare of Northern consumers and the profitability of Southern firms.

### **Relationship between Environment-related Technical Barriers to Trade and Trade in Indian T&C Sector**

1. Environmental standards imposed by developed economies have stood out as technical barriers to trade for developing economies like India. Without meeting their environmental standards, the T&C products manufactured in India face entry barriers in developed economies. However, environmental standards or eco-labels and other European environmental directives such as REACH have both positive and negative effects upon the Indian T&C sector. While the negative effect may depress the positive effect in the short run, the reverse is likely to happen in the long run.
2. Some of the positive effects emanating from eco-labels are:
  - a. The imposition of TBT will push the Indian T&C sector for sectoral reforms and technological innovations.
  - b. The Indian T&C firms will work towards meeting green standards, thereby expanding their export destinations.
  - c. With the adoption of green standards, the Indian T&C sector will help protect domestic environment and raise environmental consciousness among Indian consumers as well.
3. Some of the negative effects emanating from eco-labels are:
  - a. Due to technical barriers to trade resulting from European environmental standards, Indian T&C products have faced entry barriers in developed economies. This has negatively affected the Indian economy.
  - b. Even after compliance with environmental standards, the Indian T&C products lose competitiveness due to increased cost of production.

- c. Small and medium enterprises in T&C sector are unable to comply with environmental standards because of high cost involved in compliance.
- d. There is a jungle of eco-labels out there and compliance with one environmental standard does not guarantee free entry to all export destinations. As such, Indian T&C manufacturers are puzzled as to which environmental label to adopt for entry into European and other markets.

### **Concluding Remarks**

India exports a sizeable amount of its T&C products to the Western world, especially the EU and the US. As such, it is rational for Indian T&C firms to adopt Western eco-labels like the Nordic Swan, the EU Flower and the Green Seal.

But the Indian T&C sector faces a number of eco-compliance challenges. The sector is very fragmented and it is difficult to work with Indian suppliers like yarn makers, dye companies and others (Wickerham, 2013). The small suppliers of T&C sector are reluctant to adopt environmental standards. This is mainly due to low level of knowledge on environmental standards as well as significant cost involved in adopting them. Hence, Indian small and medium enterprises (SMEs) in T&C sector require substantial capacity building and training programmes on eco-labelling standards. They require technical knowledge and help in complying with environmental standards (Wickerham, 2013).

Moreover, Indian consumers are confused over several green claims made by manufacturers and retailers. They are also confused due to high level of mistrust among concerned stakeholders. Despite the emergence of green consumerism, the lack of clear environmental policy mechanisms in India has baffled Indian consumers.

Nevertheless, an important task for T&C firms in developing countries like India is switching to green technology and adopting environmental standards. This way, producers will be exhibiting corporate social responsibility by using resources wisely and disposing of used materials safely.

Furthermore, in developing countries, there is a need for promoting greater consumer awareness towards green economy. This way, consumers will be helping to keep the environment clean by using eco-labeled products that are environmentally safe and biodegradable.

Finally, Southern producers may get confused with regard to adoption of a specific eco-label. Furthermore, there is a general concern among

Southern firms as to what would happen to their products if they adopt Southern eco-labels. Will Southern eco-labels be accepted in the international market? Will their products be sought after by Northern consumers? This and other such questions persist among Southern firms with regard to adoption of specific eco-labels. Hence, one solution would be harmonisation of North-South eco-labels for an overall welfare of Northern consumers and profitability of Southern firms.



# 4

## Survey Findings

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This chapter presents findings from three separate survey results. First, it presents findings from a producer survey done in India. Second, it shows findings from a stakeholder interview done in Norway. And third, it presents findings from a consumer survey done in selected European countries. These surveys were done with an objective to:

- estimate the future demand for eco-labeled T&C products;
- analyse the institutional set-up and related matters in European countries to address market access issues of Indian T&C products; and
- identify the supply-side constraints on T&C products from Indian T&C manufacturers.

### A. Producer Survey

#### Introduction

In order to promote the optimal use of eco-labels so as to enhance environmental sustainability, consumer welfare in the North, and producer profitability in the South, CUTS International along with ACE GLOBAL conducted this survey with the support from Norwegian Ministry of Foreign Affairs. The producers' views on eco-labelling, their level of environmental awareness, various tariff and non-tariff measures and other important aspects associated with eco-labelling in T&C sector were analysed through the survey. The survey particularly aims to ascertain trade impacts of eco-labelling on the Indian T&C sector, thereby recommending policy suggestions on environmental standards to bolster net welfare of stakeholders associated with the T&C sector.

### *Data & Research Methodology*

A total of 105 manufacturing and exporting firms consisting of small, medium, and large scales were surveyed from the following major production locations: NCR (Delhi, Gurgaon, and Noida), Ludhiana, Panipat, Coimbatore, Tirupur, Ahmedabad, Mumbai and Surat. The selection of these clusters is a purposive one as they are major centres of T&C production. The firms' owners/managers were interviewed face to face regarding the firms' adoption of environmental standards, their trade impacts, and others. Table 4.1 illustrates the distribution of sample size across survey locations.

<b>T&amp;C Production Centres</b>	<b>Sample Size (n)</b>
Ahmedabad	10
Surat	10
Tirupur	18
Coimbatore	7
Mumbai	10
Panipat	15
Noida	10
Gurgaon	10
Ludhiana	15
Note: All T&C firms surveyed here are both manufacturers and exporters.	

Table 4.2 depicts the number of firms manufacturing and exporting various T&C products.

<b>Products Manufactured and Exported</b>	<b>Number of Firms</b>
T-shirts, singlets and other vests, knitted or crocheted	18
Men's or boy's shirts, knitted or crocheted	16
Women's or girl's suits, ensembles, jackets, blazers, dresses, skirts, divided skirts, trousers, bib, etc.	15
Men's or boy's suits, ensembles, jackets, blazers, trousers, bib and brace overall, breeches etc.	14

*Contd...*

Women's or girl's slippers, petticoats, briefs, panties, night dresses, pyjamas, negligees, bathrobes etc.	13
Women's or girl's blouses, shirts and shirt-blouses, knitted or crocheted	11
Men's or boy's suits, ensembles, jackets, blazers, trousers, bib and brace overall, breeches, etc.	10
Men's or boy's shirts	10
Women's or girl's suits, ensembles, jackets, blazers, dresses, skirts, divided skirts, trousers, bib, etc.	10
Women's or girl's blouses, shirts and shirt-blouses	9
Other furnishing articles (excluding those of heading 9404 – mattress supports, articles of bedding etc.)	9
Carpets and other textile floor coverings, knotted, whether made up or not	8
Men's or boy's underpants, briefs, nightshirts, pyjamas, bathrobes, dressing gowns and similar, etc.	8
Women's or girl's singlets and other vests, slippers, petticoats, briefs, panties, nightdresses, pyjamas	7
Textile fabrics, impregnated, coated, covered or laminated with plastics, other than those of heading 5902	6
Babies' garments and clothing accessories, knitted or crocheted	6
Babies' garments and clothing accessories	6
Woven fabrics of cotton 85% or more by weight of cotton, weighing not more than 200g/m <sup>2</sup> unbleached	5
Yarn (other than sewing thread) of synthetic staple fibres, not put up for retail sale	5
Woven fabrics of synthetic filament yarn, including woven fabrics obtained from materials of heading 5404	4
Other carpets and other textile floor coverings, whether made up or not	4
Embroidery in the piece, in strips or in motifs	4
Other garments, knitted or crocheted	4
Shawls, scarves, mufflers, mantillas, veils and the like	4
Curtains (including drapes) and interior blinds, curtain or bed valances	4
Cotton yarn (other than sewing thread), containing 85% or more by weight of cotton	3
Track suits, ski suits and swimwear, other garments	3
Woven fabrics of silk or of silk waste	2
Cotton, not carded or combed	2

Contd...

Woven fabrics of cotton, contains 85% or more by weight of cotton, weighs more than 200 g/m2 unbleached	2
Synthetic filament yarn not put up for retail sale, including synthetic monofilament of less than 67 decitex	2
Artificial filament yarn (other than sewing thread) including artificial monofilament of less than 67 decitex	2
Bed linen, table linen, toilet linen and kitchen linen	2
Sacks and bags, a kind used for packing goods	2
Other made up articles, including dress patterns	2
Cotton yarn (other than sewing thread) put up for retail sale	1
Yarn (other than sewing thread) of artificial staple fibres, not put up for retail sale	1
Woven fabrics of syn staple fibres, containing 85% or more of syn staple fibres C and polyester staple fibres	1
Other woven fabrics of synthetic staple fibres of polyester staple fibres	1
Carpets and other textile floor coverings, tufted, whether or not made up	1
<i>Some General Characteristics of Surveyed Firms</i>	

<b>Table 4.3: Annual Turnover</b>			
<b>Annual Turnover (US\$)</b>	<b>Number of Respondents/Firms</b>		
	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>
Less than 0.214 million	3	3	2
0.214-2.136 million	34	32	29
2.137 -10.683 million	18	22	31
10.684-21.367 million	4	4	5
More than 21.367 million	1	2	2
No Responses	45	42	36
Average Annual Turnover million	2.5963 million	3.2720 million	4.0406
Note: These figures include both exports and domestic sales. The numbers were converted to USD at purchasing power parity and adjusted for inflation using base year prices of 2000.			

Table 4.3 shows the surveyed firms’ sizes in terms of annual turnover. The firms’ annual turnover has increased over the years. The average annual turnover of the surveyed firms was US\$2.59mn in 2008-09. It soared to US\$4.04mn in 2010-11.

Loan Amount (US\$)	Number of Firms				
	2006-07	2007-08	2008-09	2009-10	2010-11
Less than 0.214 million	-	1	1	-	-
0.214-2.136 million	3	4	6	7	8
2.137-10.683 million	2	-	-	1	-
More than 10.683 million	-	1	1	1	1

Access to subsidised credit is regarded as an important aspect for potential industries. In times of financial crisis and in the process of upgrading technology, firms require credit. But very few T&C firms have access to subsidised credit (Table 4.4).

**Survey Findings**

*i. Exports, Environmental Compliance, and Tariff Measures*

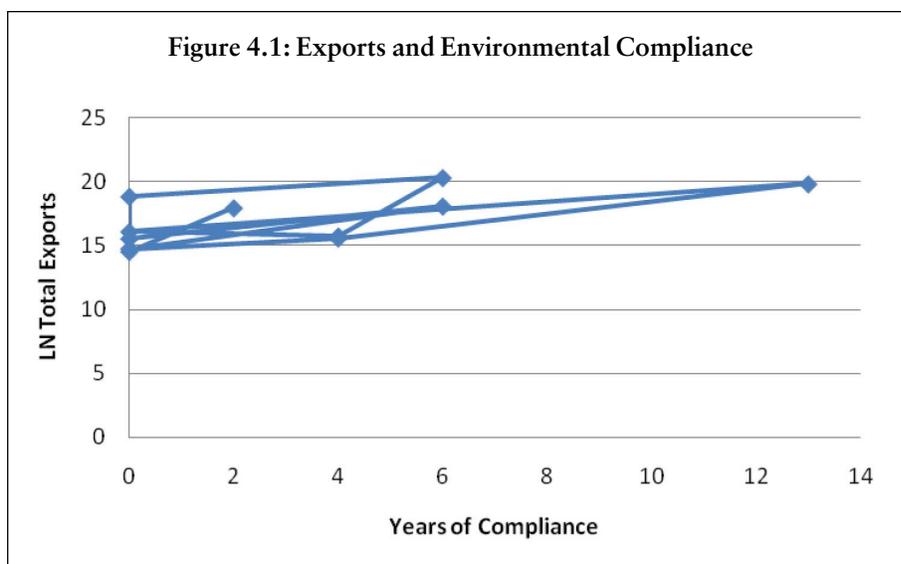


Figure 4.1 illustrates the relationship between exports and environmental compliance of T&C firms. There is an upward sloping relationship between the two indicating that exports do increase with environmental compliance.

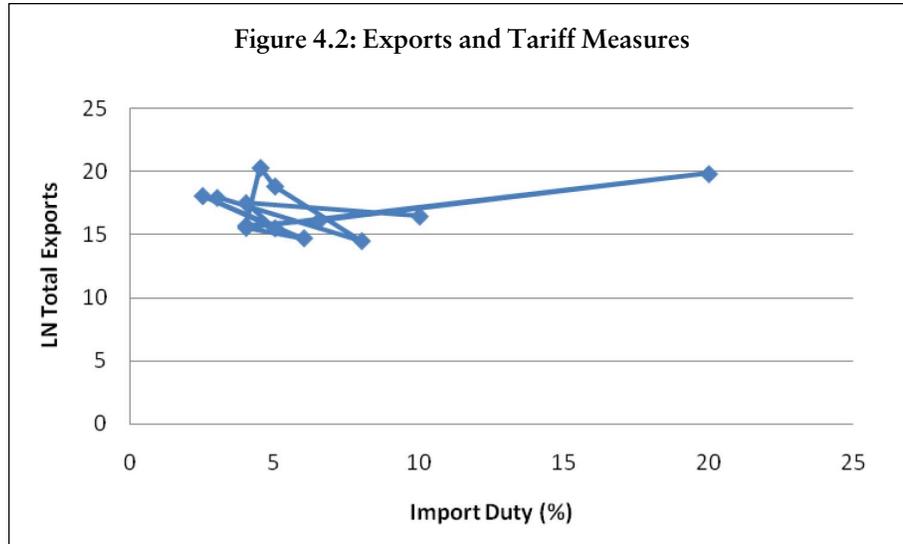


Figure 4.2 illustrates the relationship between exports and tariff measures in terms of import duty faced by T&C firms. With an exception to an outlier, the figure shows that exports slightly decrease with increased import duty. Hence, this finding confirms the notion that tariff measures such as import duty do hinder the export of T&C firms.

#### *ii. Impact of Economic Recession*

With the economic downturn in the Western world, especially in the US and the EU, the Indian T&C sector too felt the heat of the financial crisis. The US and Western Europe are the major export destinations of T&C products manufactured in India. Findings show that 21 percent of the respondents have felt the impact of recession upon their businesses. While the firms did not disclose the monetary impact, the recession largely affected their capacity utilisation. In 2007-08, nine firms faced export order cancellation amounting to ₹20 million. In 2010-11, five firms faced export order cancellation amounting to ₹8 million and yet another five firms faced similar consequences amounting to ₹40 million in the same period. This setback has resulted in substantially reduced capacity utilisation for the firms (Table 4.5).

<b>Table 4.5: Impact of Economic Recession</b>				
<b>Export Order Cancellation (INR)</b>	<b>Number of Firms</b>			
	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>
8 million	-	-	-	5
10 million	-	-	5	-
15 million	-	5	5	-
20 million	9	-	5	-
35 million	-	-	5	-
40 million	-	5	-	5
50 million	5	-	-	-
60 million	-	5	-	-
80 million	5	-	-	-
90 million	-	5	-	-
<b>DON'T KNOW CAN'T SAY</b>	<b>82</b>	<b>82</b>	<b>82</b>	<b>91</b>
<b>Average Amount of Cancellation (Million)</b>	<b>43</b>	<b>51</b>	<b>20</b>	<b>24</b>
<b>Capacity Utilisation (in %)</b>				
Less than 10%	-	5	-	-
10-25%	9	9	23	5
More than 25%	5	5	9	14
Don't know, can't say	86	82	68	82
<b>Average Change in Capacity Utilisation (%)</b>	<b>23</b>	<b>21</b>	<b>23</b>	<b>38</b>
<b>Change in Employment (%)</b>				
Less than 10%	9	9	9	-
10-25%	9	5	18	14
More than 25%	-	5	18	36
Don't know, can't say	82	82	55	50
<b>Average Change in Employment (%)</b>	<b>9</b>	<b>13</b>	<b>29</b>	<b>43</b>
<b>Change in Production (in value)</b>				
Rs 20 million	5	-	-	-
Rs 25 million	-	5	-	-
Don't know, can't say	95	95	100	100
<b>Average Change in Production (Million)</b>	<b>20</b>	<b>25</b>	<b>-</b>	<b>-</b>

### iii. Competition

With increased trade liberalisation, companies across the globe compete with each other on quality, price, labour cost and environmental standards, among others. In a level playing field, only those companies survive that can provide cost-effective and quality products that comply with environmental standards. However, in reality, the scenario is quite different. Differential freight cost, duties, and taxes across the borders distort trade volume. For the sake of protectionism, non-tariff measures such as anti-dumping too distort trade volume. Table 4.6 summarises the varied nature of competition faced by Indian T&C firms.

Competitors	Quality (n=44)	Price (n=45)	Labour cost (n=47)	Raw material availability (n=28)	Raw material cost (n=23)	Freight cost (n=25)	Duties & Taxes (n=28)	Anti Dumping (n=14)	Certification (n=20)
Australia	1	1	-	-	-	-	2	1	-
Bangladesh	3	5	10	8	3	11	8	4	10
Canada	1	-	-	-	-	-	-	-	-
China	11	31	22	7	7	9	6	7	5
Europe	-	-	-	-	-	-	-	-	1
Germany	4	-	2	-	1	1	2	1	4
Indonesia	-	-	-	3	2	-	-	-	-
Italy	4	2	-	-	2	-	-	-	-
Japan	3	-	-	-	-	-	-	-	-
South Korea	-	-	-	2	2	-	-	-	-
Malaysia	1	-	-	-	-	-	-	-	-
Nepal	-	-	3	-	-	-	-	-	-
Pakistan	1	1	5	3	3	1	1	1	-
Russia	1	-	-	-	-	-	-	-	-
Singapore	-	3	-	2	1	-	-	-	-
Spain	2	-	1	1	1	-	-	-	-
Sri Lanka	-	-	4	2	1	-	-	-	-
U K	3	-	-	-	-	2	7	-	-
U S A	9	2	-	-	-	1	2	-	-

Note: n represents number of firms

Table 4.6 shows that the Indian T&C sector faces the biggest competition from China and Bangladesh. For example, table 4.6 shows that 31 Indian T&C firms face competition from China on price for the finished materials. Similarly, 10 Indian T&C firms face competition from Bangladesh on labour cost. It is noteworthy that China is one of the top cotton producers in the world with an extensive T&C manufacturing sector. Chinese textiles are cheaper than Indian textiles because of low production cost in China (Table 4.6). Bangladesh textiles have an advantage over Indian textiles in terms of freight cost and taxes (Table 4.6). And US products have an advantage over Indian products in terms of quality (Table 4.6).

#### *iv. Tariff and Non-tariff Measures*

Table 4.11 (see annexure) shows the various export destinations where Indian T&C sector faces tariff measures. Only 10 percent of the respondents have indicated tariff barriers faced in the export destinations. The products that fall under category HSCODE 6103 face high tariff in Brazil amounting to 33 percent. Similarly, products that fall under categories HSCODEs 6108 and 5209 face high tariff in Italy and US respectively. These tariff figures are in accordance with official data, thereby reinforcing the existing findings on tariff measures. Respondents have reported non-tariff measures in major destinations like Dubai, US, and UK. But the respondents did not identify types of non-tariff barriers faced by Indian T&C products.

#### *v. Environmental Consciousness*

Table 4.7 depicts that Indian T&C firms are aware of environmental degradation and they tend not to pollute the environment by following unsustainable means of production. For example, 20 respondents said that they properly dispose of waste products. Similarly, 18 respondents said that they try not to harm the environment (Table 4.7).

When asked whether the firms allot budget for environmental initiatives, such as adopting efficient technology and following eco-label norms, 43 firms said that they have the necessary budget for such initiatives. But disappointingly, more than 50 firms indicated that they do not have the necessary budget for environmental initiatives.

<b>Sample Size (n=105)</b>	
We properly dispose the waste products	20
We try not to harm the environment	18
We have sense of responsibility to preserve the environment	10
We maintain eco-friendly environment	5
We recycle the waste products	5
We follow the necessary norms	3
We use latest technology	3
We do not waste materials unnecessarily	3
We strictly follow eco-label norms	3
We try to avoid pollution	2
Others	12
Don't Know Can't Say	21

*vi. Environmental Standards & the EU Regulation*

Among several environmental standards, majority of respondents are aware of ISO (International Organisation for Standardisation) 14001 and REACH (Registration, Evaluation, Authorisation and Restriction of Chemical), the EU regulation. 73 and 65 percent of the respondents are aware of ISO 14001 and REACH respectively.

<b>Environmental Standards&amp; the EU Regulation</b>	<b>Number of Firms Aware of them</b>
ISO 14001	73
REACH (Registration, Evaluation, Authorisation, and Restriction of Chemical)	65
GOTS (Global Organic Textile Standard)	63
SA 8000 (Social Accountability)	61
WRAP (Worldwide Responsible Accredited Production Principles)	61
Oeko-Tex Standard 100	51
FLO (Fair-trade Labeling Organizations International)	37
Cedex	5
SSI	3

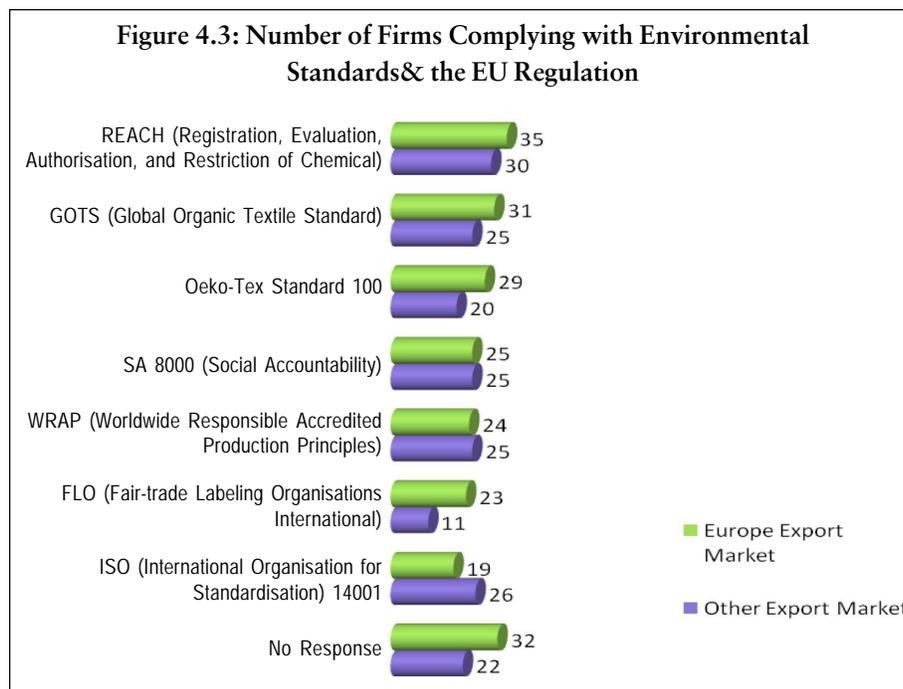


Figure 4.3 shows that environmental standards such as REACH and GOTS that are applicable to EU are widely complied with by the Indian T&C sector. While 32 percent of the firms surveyed have not complied with any environmental standards applicable to EU, 22 percent of the firms surveyed have not complied with any environmental standards applicable to other export destinations. Other equally acceptable environmental standards in the EU are WRAP and FLO.

**Table 4.9: Certification as per Environmental Standards**

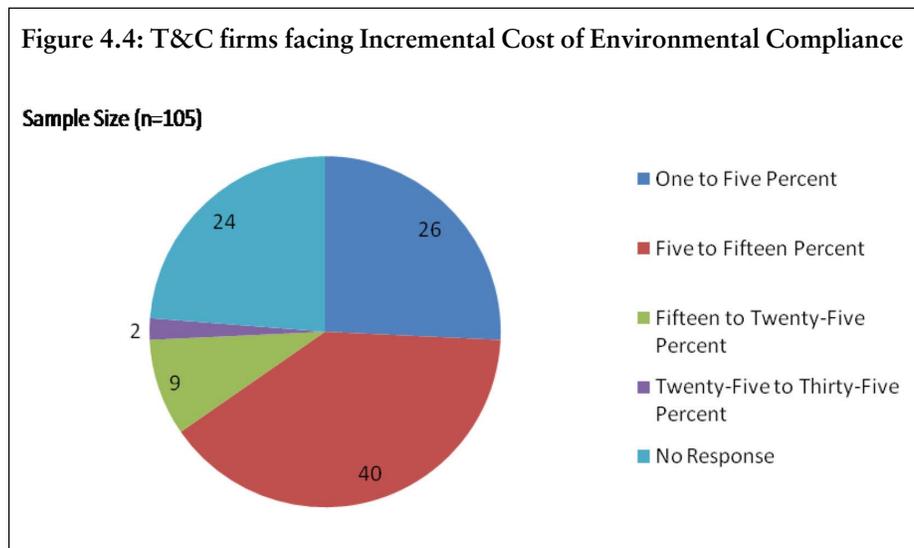
Has Environment Standard?			
	Yes	No	Cannot Disclose
ISO 14001	18	55	27
SA 8000 (Social Accountability)	17	44	39
GOTS (Global Organic Textile Standard)	17	46	37
Oeko-Tex Standard 100	10	42	49
REACH (Registration, Evaluation, Authorisation, and Restriction of Chemical)	16	49	35
WRAP (Worldwide Responsible Accredited Production Principles)	5	56	39
FLO (Fair-trade Labeling Organisations International)	5	32	63

T&C firms face non-tariff barriers in the absence of certification of environmental standards. When asked whether or not firms have obtained certification for environmental standards, a large number of respondents did not disclose their certification status. Less than 20 percent of the respondents indicated obtaining such certification. WRAP and FLO certifications are obtained by only 5 percent of the respondents. Overall, the results show that firms' level of acquiring certification is very low.

But there are some major issues associated with compliance to environmental standards:

- a. There is a jungle of eco-labels out there across the globe. Indian T&C manufacturers are puzzled as to which environmental standards to adopt.
- b. The small and medium enterprises (SMEs) require significant cost for upgrading their level of technology to meet foreign environmental standards.
- c. The cost of compliance is significantly higher for Indian T&C firms.

Figure 4.4 depicts incremental cost of environmental compliance faced by Indian T&C firms. 40 T&C firms indicated that their production cost increased by 5-15 percent with environmental compliance. Similarly, nine T&C firms indicated that their production cost increased by 15-25 percent with environmental compliance. And two T&C firms indicated that their production cost increased by 25-35 percent with environmental compliance.



Indian T&C firms also said that they have testing facilities located near their production houses or offices. However, their main concern is the cost associated with testing and other procedural requirements. Furthermore, they lack knowledge regarding such tests and certification of clothing products.

### Concluding Remarks

The survey findings shed light upon a range of issues associated with the T&C sector in India that faces competition from major cotton-producing countries, such as Bangladesh and China (Table 4.6). In today's age of cut-throat competition, the sector needs to focus on content and design to meet the requirements of foreign demand. T&C manufacturers are aware of environmental standards, but they lag behind in acquiring certification of environmental standards. The sector needs to acquire certification for greater penetration in the international market.

The findings further shed light upon the effect of environmental standards upon trade. Environmental standards have been imposed upon internationally traded goods. This is done mainly to protect the environment and 'to level the playing field' from the point of view of international competitiveness (Verbruggen *et al.*, 1995).<sup>1</sup> But by enforcing environmental standards on internationally traded goods, the developed world has been suppressing export prospects of the developing world. And so, developing countries have time and again argued against stringent environmental standards that limit their development aspirations (Verbruggen *et al.*, 1995).

Nonetheless, survey findings show that compliance with environmental standards positively impacts trade of the T&C sector. This finding can be one of the principal guidelines to advance the optimal use of eco-labels, thereby enhancing environmental sustainability, consumer welfare in the North, and producer profitability in the South.

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1. Verbruggen, H. Kuik, O. and Bennis, M. 'Environmental Regulations As Trade Barriers For Developing Countries: Eco-Labeling and rhe Dutch Cut Flower Industry', <<http://www.prem-online.org/archive/17/doc/creed02e.pdf>>, 1995, (accessed 4 December 2011).

## Annexure

**Table 4.10: Other forms of Competition**

Competitors	Customs (n=31)	Documen- tation (n=50)	Environ- mental (n=27)	Import Restriction (n=18)	Labelling (n=16)	Labour (n=25)	MFN (n=9)	Minimum Import Price (n=7)	Rules of Origin (n=7)
Australia	-	-	-	-	-	-	-	-	-
Bangladesh	4	12	2	2	-	4	3	2	3
Canada	-	-	-	-	-	-	-	-	-
China	9	7		7	-	8	4	1	4
Europe	5	-	-	-	-	-	-	-	-
Germany	4	4	6	1	-	1	-	-	-
Greek	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-
Italy	1	7	-	3	1	1	-	-	-
Japan	-	4	-	-	-	-	-	-	-
Jordan	-	-	-	-	-	4	-	-	-
Korea	-	-	-	-	-	-	-	-	-
Malaysia	-	-	-	-	-	-	-	-	-
Nepal	1	-	-	-	-	4	-	1	-
Pakistan	1	4	1	1	1	2	1	3	-
Russia	-	-	-	-	-	-	-	-	-
Singapore	-	-	-	-	-	-	-	-	-
South Africa	-	3	3	-	3	-	-	-	-
Spain	-	-	7	2	3	-	1	-	-
Sri Lanka	-	-	1	-	2	1	-	-	-
Thailand	-	-	-	-	-	-	-	-	-
Turkey	-	-	-	-	-	-	-	-	-
UK	5	2	3	1	3	-	-	-	-
USA	1	7	4	1	3	-	-	-	-
Note: n represents number of firms									



<b>Export destinations</b>	<b>NTB faced (% of respondents)</b>
Dubai	21
USA	14
U K	11
Kuwait	9
Malaysia	6
Hong Kong	5
France	5
Gulf	5
Europe	3
Pakistan	3
UK	3
Thailand	2
Middle East	2
South Africa	2
Saudi Arabia	7
Brazil	2
Mexico	2
UAE	2
Australia	2

## B. Stakeholder Interview

### Introduction

Due to the phasing out of international quota regime in 2005, the trade of textiles is now freer than before. Output from the sector has been increasing while prices have been dropping over the years. In 2000, the world's consumers spent about US\$1tn buying clothes. About one-third of the sales occurred in Western Europe and another third occurred in North America (Allwood *et al*, 2006).

The production volume as well as the textile production process represents an environmental challenge. Today, the textile industry is one of the biggest greenhouse gas (GHG) emitters on earth owing to its size and scope, and apparels and textiles account for approximately 10 percent of the total carbon impact (Zaffalon, 2010).

Sustainability issues in the T&C sector are now being given increased attention by scholars from many disciplines, including the fashion and textile industry itself. One of the most popular solutions proposed is the use of eco-labels in T&C. Since the late 1970s and the early 1980s, national and international eco-labelling schemes have been set up all over the world. Eco-labelling is a market-based and consumer-oriented approach to dealing with environmental issues (Boström and Klintman, 2008:28) which presupposes a relatively rational actor, able to seek and process information and willing to act upon that information (Stø, *et al*, 2005:22). The strategy of regulating environmental issues through voluntary measures like eco-labelling has proven to be successful within other retail sectors, like the European Energy Label that has changed the market for household appliances (Stø and Strandbakken, 2008), and the Nordic Swan and the German Blue Angel which have been a success for products like household chemicals, paper and paint (Rubik and Frankl, 2005). Today, several of the existing labelling schemes have developed criteria for T&C and new labelling schemes for textiles have emerged, but the use of these labels is not very extensive as yet (Stø and Laitala, 2011).

The main purpose of the project 'A Study of Environmental Standards and their Trade Impacts: The case of India' is to generate improved understanding of the potential for environmental and social labels as communicative tools among European consumers and Indian textile producers. One objective is to identify barriers towards using eco-labelling as a tool to improve sustainability of the textile supply chain.

### *Research Questions*

The overarching purpose of this report is to help identify some of these barriers. As far as we know, no previous studies have been done on stakeholder preferences regarding the use of eco-labels on textiles. The objective of the report is therefore to explore and map the experiences and attitudes of the Norwegian stakeholders associated with the textile industry, as a first step towards identifying barriers towards using eco-labels. More specifically, we seek to answer the following questions:

- I. If anything, what has been done by the various stakeholders to increase sustainability of the textile supply chain?
- II. Who are perceived as responsible actors?
- III. What are perceived as good solutions to the problem?

Based on the mapping of the stakeholders' attitudes and experiences, we continue with an initial discussion about which barriers exist for the use of eco-labels on textiles. Before we move on, we find it necessary to clarify what we mean by eco-labelling in this context. As initially stated, eco-labelling is a market-based and consumer-oriented approach to dealing with environmental issues (Boström and Klintman, 2008:28). Eco-labelling is here further defined as *consumer-oriented labels and labelling schemes used on products or on packaging in the form of symbols/pictures which are supposed to tell something about the environmental effects of the products and/or the production process.*<sup>2</sup> We will adopt a broad understanding of eco-labels, and will also include organic labels and some social and health labels in the discussion.

### *Structure of the Report*

The report provides introduction and describe the method and selection of data. It provides some background information about the structural development of the T&C industry, which is important in order to understand the perspectives of the stakeholders. Based on the findings a discussion on barriers for the use of eco-labels in the T&C industry will be initiated. It gives some suggestion for future research.

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2. This definition builds on the definition of labelling by Heidenstrøm, Jacobsen and Borgen (2011).

## Methodology

### *Case Study Approach*

This report is a part of the joint project between the National Institute for Consumer Research (SIFO) and CUTS International (Consumer Unity and Trust Society) called “A Study of Environmental Standards and their Trade Impacts on Indian Textiles and Clothing Sector”, which can be characterised as a case study. A case study is defined by Gerring (2007:20) as “*the intensive study of a single case where the purpose of that study is – at least in part – to shed light on a larger class of cases (a population)*”. The case studied in this project is thus sustainability issues in the global textile industry, focussing on the textile production in India and the consumption of textiles in Europe. The case study contains several within-case studies. The main goal of the within-case study presented in this report is to identify and analyse stakeholders perceptions and attitudes towards use of eco-labels on textiles.

The case study has been criticised by proponents of statistical methods and has been considered as an inferior approach to social science (Gerring, 2007:5-8). Some of the main objections against the case study have been its lack of clear evidence and the problems with generalising the findings, and hence has a low scientific value. Others have highlighted the case study’s many advantages, both for the researcher and the scientific community. One of the advantages is the inherent *flexibility* - the researcher may employ a variety of techniques, both qualitative and quantitative, in order to collect evidence (Gerring, 2007:33). Thus methodological triangulation is often used to strengthen both the validity and the reliability of the findings. Several researchers argue that robust causal analysis also can be carried out through within-case or even cross-case analysis (Tansey, 2007). Within-case analysis entails exploring causal relationships with reference to multiple features of individual cases (Tansey, 2007). This brings us to another case study advantage, namely its form as a *depth study* of a single unit, which increases the internal validity of the study.

The case of environmental standards in the textile industry value chain has in this project been divided into several within-case studies in order to cover the whole value chain. By using the method of process tracing, we will explore causal processes and complex decision-making throughout the value chain. As previously mentioned, we will use this report to explore the perceptions and attitudes towards sustainability measures in the textile industry among Norwegian stakeholders, with a special focus on eco-labelling schemes. Its conclusions cannot automatically be generalised to a larger class of stakeholders in other parts of the world. However,

improved insight into the Norwegian case can be transferable and improve understandings of important dynamics and factors regarding the role of different stakeholders in general.

### *Elite Interview as a Method*

In order to give answers to our research questions we can make use of written sources like the firms' codes of conduct, the declared goals of the various eco-labelling schemes, government white papers etc., but this would not be able to give us a complete picture of the stakeholders' attitudes.

As the documents published by various stakeholders may present an overly positive picture and a possible misleading account of the firm's, government's or organisations' work on sustainability matters, other sources of information is needed. Interviews can be an important method when trying to move beyond the written accounts and presented narratives. Interviews may thus provide new information that will advance the research process, and in our case the interview's main function is to establish what people think – what their “attitudes, values and beliefs are” (Aberbach and Rockman in Tansey 2007:766). Thus, elite interviews can shed light over hidden elements of political action that are not clear from an analysis of primary documents, and they can compensate for the limitations connected to documentary evidence (Tansey 2007). We have therefore chosen to collect data from interviews with key stakeholders. The data collected from these interviews will, when possible, be evaluated against existing sources like the ones previously mentioned.

Needless to say, this method also has its disadvantages, which it is important to give attention to throughout the research process. To interview experts on the subject can create challenges like the relationship between the researcher and the interviewee, sample method and requirements for preparation. It is possible that the interviewees would like to impact the analysis in their favour. Informants may have a tendency to emphasise their own role and rationalise (Andersen, 2006). Other disadvantages can be the so-called interview effect. It can be poorly formulated questions providing biased data or reflexivity: that the informants answer what they think the researcher would like to hear (Yin, 2003). In order to secure the validity of the findings it is therefore important to cross-check the information gained with other sources and against the information given by other informants. Opposing tendencies in the data material can strengthen the informants' credibility further.

### *Selection of Informants*

The goal of this study is to obtain information about the stakeholders' perceptions of and attitudes towards environmental standards in the T&C industry. First, we have to clarify what we mean by a *stakeholder* approach. The 'classical' stakeholder concept was developed within management theory dealing with the relationship between business firms and corporations, on the one hand, and their environment, on the other hand. It was an expansion of the well-known *shareholder* concept. Firms have to take into account not only the interests of their shareholders, but also their stakeholders.

In his book *Strategic Management: A Stakeholder Approach*, Freeman (1984) defines stakeholders as “*any group or individual who can affect or is affected by achievements of the firm's objectives*”. The concept has later expanded from the business management theory to the society; it integrates the responsibilities of organisations, policy makers, scientists and consumers (Dentchev and Heene, 2003). The stakeholder approach has functioned as a guide for identifying the key actors and thus for the selection of informants. The aim is, however, not to draw a representative sample of a larger population of actors, but to draw a sample that includes the most important stakeholders who are part of the textile value chain, either directly or indirectly.

We have therefore made a strategic selection of the informants based on existing knowledge about the Norwegian stakeholders in the T&C sector. We also made sure to ask our informants if they could think of other possible stakeholders who would be relevant for us to include in the sample. We used the snowball sampling method. In total, we conducted 17 interviews with 23 informants. Six represented businesses and their organisations, three represented design institutions, three represented labelling organisations, seven represented political authorities/ministries and three represented NGOs/environmental organisations.

### *Conducting Interviews*

The majority of the interviews were conducted in June and in August/September 2011. One of the interviews was conducted in February 2012. They were all semi-structured, using a detailed interview guide.

The themes of the interview guide are as follows:

- The organisation/company's role related to environmental standards on T&C

- Environmental standards and environmental labelling in the (Norwegian) debate
- Relationship with India/country of origin

This method encourages the informants to talk freely about the pre-decided themes, and allows them to focus on what they consider to be most important. Some of the flexibility of qualitative interviews lies in the fact that the interview guide can be, and should be, adjusted according to the informants' knowledge and interests (Repstad, 1987). The interviews lasted from half an hour to one hour.

Sections of the report where the information from the respective informants is used were sent to the informants for comments before the publication of the report. All informants have approved the use of their quotes in the report. For one informant, Voice Norway, much had happened since the interview was conducted in August 2011 until the finalisation of the report in December 2012. We will thus refer to information retrieved both in 2011 and in 2012 in this report. The use of quotes from the different periods of time illustrates some of the changes that have happened within the industry during the period since the interviews were conducted to the publication of the report.

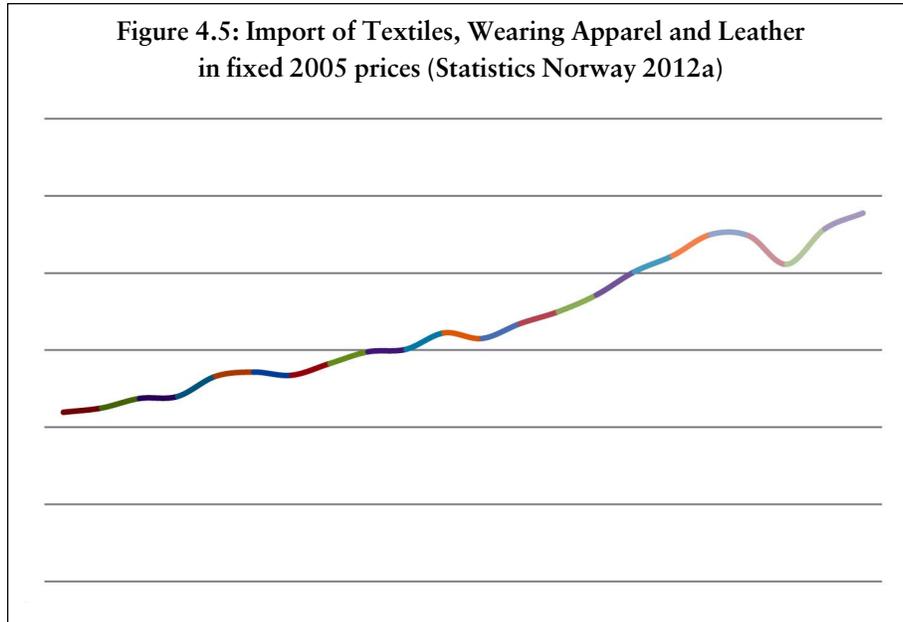
## Textiles & Clothing Sector

### *Increased Import of Textiles*

In 2008 the total value of imports of T&C to Norway was US\$2.5bn. The main exporting country was China, which accounted for 42 percent of the export to Norway. The EU accounted for 31 percent while India and Bangladesh accounted for three percent each (NHD, 2009). In 2010, the total value of imports of textiles to the EU was •83.7bn.

The Norwegian import of clothing and accessories increased approximately 600 percent in value between 1976 and 2008, and during the same time period we have seen a significant change in the international trade patterns of textiles. In the mid-1970s, the majority of the Norwegian import came from its neighbouring countries. Today, very few T&C products are produced in Norway, and the import from Asia dominates the market. In addition to a large increase in the value of the import, the volume of the import has increased significantly and prices have decreased. The increased import of textiles to Norway from 1990 until 2011 are shown in fixes 2005 prices in Figure 4.5.

**Figure 4.5: Import of Textiles, Wearing Apparel and Leather in fixed 2005 prices (Statistics Norway 2012a)**



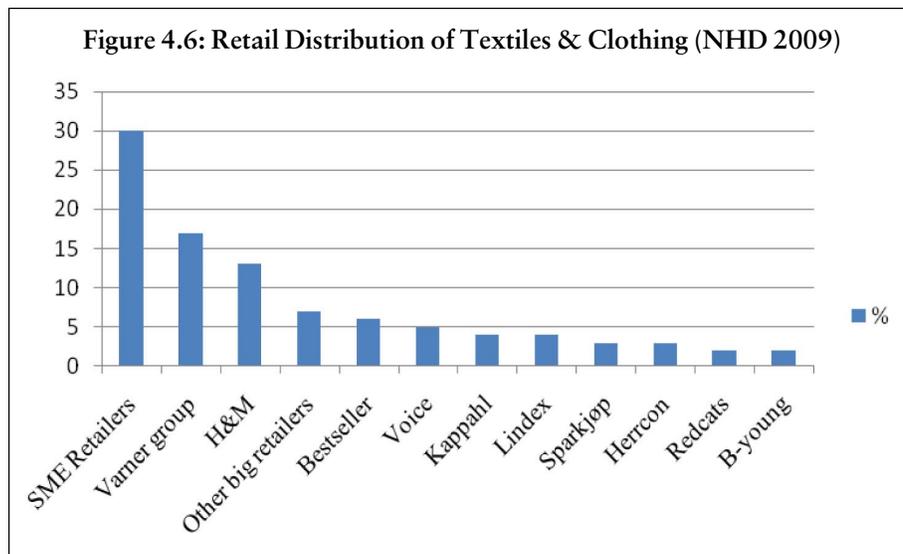
This structural change of the textile market is partly due to the changes in the regulation of international trade. A gradual move of import from high-cost developed countries towards import from low-cost developing countries has been an important factor. Changes in trade policy frameworks for import have been a prerequisite for this change. A general liquidation of the import quotas on clothing combined with a strong reduction of tariffs throughout the 1990s, which culminated in the liquidation of the Multi-Fibre Arrangement on December 31, 2004, has opened the Norwegian market for Asian suppliers (Moe 2002).

#### *Structure of the T&C sector*

Two major market segments can be identified in the structure of the T&C sector. The first one is the high-quality fashion market, where the industry is characterised by modern technology, relatively well-paid workers and designers and a high degree of flexibility (Nordås, 2004). The competitive advantage in this market segment is related to the ability to design and produce tastes and preferences and create fashion trends. The core function of firms servicing this market segment is mainly located in developed countries. The other market segment is mass production of lower quality products which are often organised by retailers which have developed their own brands and source their clothing directly from suppliers. Manufacturers of these products are mainly found in developing

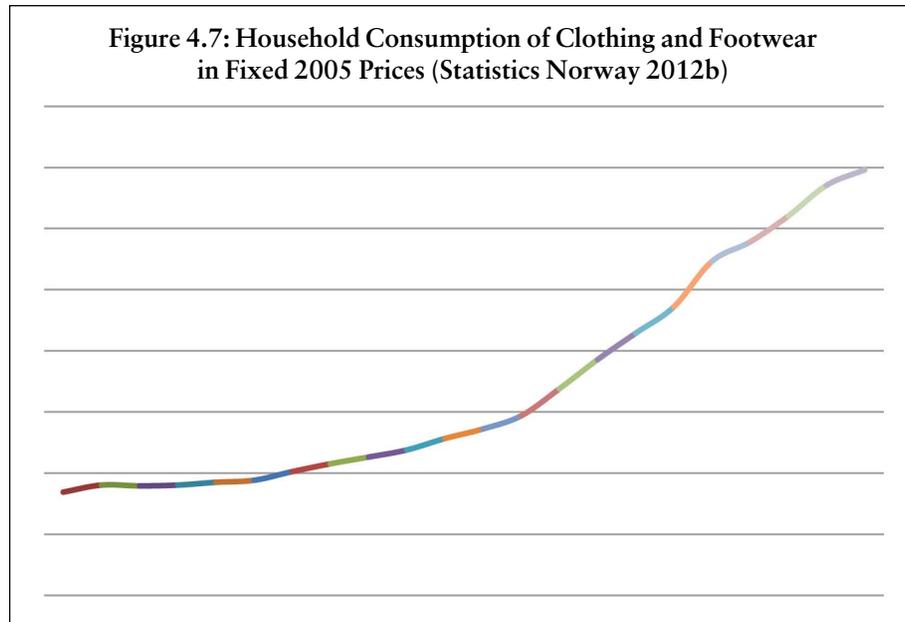
countries and the role of the retailer has become increasingly prominent in the organisation of the supply chain. The retail market has become more concentrated, leaving more market power to multinational retailers (Nordås, 2004). These retailers accounted for half of the total garment imports in the European Union in the mid-1990s (Gereffi in Nordås).

In 2006, the total market value within the textile sector in Norway was US\$4.7bn excluding VAT. Table 4.13 illustrates the different retailers' market share. Representatives from the Varner group, H&M and Voice Norway are among the stakeholders interviewed for this research project.



### *Consumption*

The changes in the textile sector have also resulted in lower prices and increasing volumes of textiles per capita. Today consumers spend a smaller share of their income on clothing than in the past, although they shop more frequently and buy a higher number of clothing items than before. In Figure 4.7 the increase in the household consumption of clothing and footwear is illustrated in fixed 2005 prices (Statistics Norway, 2011b).



### *Sustainability Issues in the Textile Industry*

The environmental consequences of these changes in the textile industry are substantial. Taking the sector as a whole, the areas of greatest impact in a lifecycle perspective are the large quantities of water and pesticides required for growing cotton, impacts on water linked to natural fibre production, emissions to air and water arising from producing synthetic and cellulose fibres, and the significant use of non-renewable resources for synthetic fibres (Fletcher, 2008). The sector's contribution to climate change is dominated by the requirement for burning fossil fuel to create electricity for heating water and air in laundering. Other major energy uses arise in providing fuel for agricultural machinery and electricity for production and cultivation of fibres and for transportation required for distribution (Allwood *et al.*, 2006; DEFRA, 2007). The main GHG-emissions are CO<sub>2</sub> from energy use, and CH<sub>4</sub> and N<sub>2</sub>O from cotton production (Mardal, 2011). Another major environmental impact arises from the high and continuously growing waste volumes from the sector.

Most of the textiles that are sold in Norway are imported. Mapping of the importers and retailers show that they often have little knowledge about the chemical content of textiles (Miljostatus 2012). There is no mandatory labelling of the chemical content, use of GMO or Nano particles in textiles (Klepp 2006), the mandatory labelling only include the textile's fibre content. The low knowledge both in the industry and among the

consumers and the lack of mandatory labelling makes the work towards improvement hard (Laitala et al. 2012). Chemicals that are used in textile production can affect both the environment and health. The largest impact is in the producing countries where e.g. large quantities of pesticides are used in the production of cotton and contaminated waste water are being discharged from the factories (Greenpeace 2012). According to the UN, 20 000 children dies each year because of pesticide poisoning in the cotton industry 80 percent of children that grows up around cotton farms have damages to the central nervous system (Fairtrade 2012).

Many of these impacts were mentioned by the informants in this project when they were asked to tell us what they perceived as the environmental challenges concerning production of T&C. The responses varied greatly in terms of the detail level and the length of the answers, but most of the business representatives placed a special emphasis on the challenges connected to the use of chemicals and water in the production phase.

Even though much has already happened within the textile industry, the informants to this study all agreed on the fact that the textile industry is facing severe environmental challenges. However, it is not as clear which actors that are responsible when it comes to responding to these challenges.

## **Stakeholder Perspectives**

In the following chapter we will present and discuss how the stakeholders perceive their own role and responsibility, and the role and responsibility of the other stakeholders to improve the environmental sustainability of the textile industry in general and their perspectives on the use of ecolabels in particular. As mentioned, eco-labels are presented as one possible solution to the sustainability challenges, and criteria for textiles have been developed within the schemes of several existing eco-labels and new labels for textiles have emerged. In order for it to be successful, the labels do however need to be embraced by (at least a majority of) the relevant stakeholders to the textile industry. The stakeholders interviewed in this project represent the following selected Norwegian Ministries, national and global retailers and industry representatives design institutions labelling institutions and NGOs.

### ***The Role of the Government***

A common environmental standard for textiles is lacking and this represents a problem both for official and non-official actors in the industry. According to the stakeholders representing different branches

of the government, the government's scope of action is limited in the case of environmental standards for textiles.

*Restrictions by international trade agreements*

The textile industry is characterised by its international scope and global supply chains. Imported goods dominate the Norwegian textile market and the main environmental impacts thus happen in the producing countries.

The Ministry of Trade and Industry is responsible for the negotiation and establishment of international and bilateral trade agreements. These negotiations are restricted by the Agreement on Technical Barriers to Trade (TBT Agreement), an international treaty administered by the World Trade Organisation (WTO). The agreement was established during the Uruguay round and its goal is to ensure that technical regulations, standards, testing, and certification procedures do not create unnecessary obstacles to trade (WTO 2011). This means that if a producer in country A wants to export to country B, he will be obliged to satisfy the technical requirements that apply in country B (WTO 2011). According to the agreement:

no country should be prevented from taking measures necessary to ensure the quality of its exports, or for the protection of human, animal, and plant life of health, of the environment, or for the prevention of deceptive practices, at the level it considers appropriate (WTO 2011).

The environmental requirements within the TBT agreement for textiles and clothes imported to Norway mainly focus on restricting the content of chemicals in the textiles and the production process per se cannot be regulated, according to our informants in the Ministry of Trade and Industry:

There are many requirements regarding chemicals in the textiles, it can be use of flame retardants and other chemicals connected to clothes. However, requirements on how the products are produced and all that are not included in the technical requirements (Ministry of Trade and Industry 2011).

Another informant from the research industry emphasise that this places the discussion in the middle of the classical WTO discussions on products and production:

The main rule in the WTO has been that regulations should be based upon products and not on the production process, meaning

that if a product is toxic it can be banned from the market but if the production process is toxic it cannot necessarily be banned. This interpretation has however been challenged and in some WTO disputes process-related measures have been accepted by the WTO... A fear in the WTO has been that the rules were to be misused as a protection measure and this has motivated a cautious approach (NUPI 2011).

This means that the Norwegian government can regulate the content of the textiles and clothes imported to the country, but it cannot place requirements regarding how the imported textiles are produced. This is confirmed by informants from the Ministry of Environment:

The Norwegian regulations will for legal and practical reasons primarily apply to things affecting our environment. When it comes to a garment made of cotton in India, the main environmental effects would be in the production process... and it would be legally and practically difficult – if not necessarily impossible – to prevent anyone from dumping tannery products in Indian rivers with regulations in Norway (Ministry of Environment 2011).

This is, according to informants from the Ministry of Trade and Industry, a task for voluntary arrangements like eco-labels. Voluntary labelling schemes can, according to several informants, go further than the government in their requirements regarding the production of textiles, and need to be seen as a supplement to regulations. The informants from the Ministry of Trade and Industry does however emphasise that they recently included a chapter on the environment and workers' rights in their on-going trade negotiations:

This applies horizontally, meaning that one wishes that the parties should undertake a commitment to improve workers' rights and the environment... the purpose of these provisions is that we have the opportunity to discuss it with the parties. There is nothing more to it than that (Ministry of Trade and Industry 2011).

As with eco-labels and information campaigns, the provisions in the chapter on workers' rights and the environments are of a voluntary character.

#### *Existing regulations on textiles*

There exist different regulations for hazardous chemicals in T&C and the regulation of chemicals is the main focus of the climate and pollution

agency's (CPA) work on textiles. The CPA also works with recycling of textiles and waste management. A cornerstone in the regulation of chemicals is the European Union's Regulation of 18<sup>th</sup> December 2006 on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). Furthermore the Product Control Act from 1976 serves the purpose "to prevent products from causing damage to health or disturbances of the environment in form of disturbances of ecosystems, pollution, waste, noise or the like". Another important act is the Environmental Information Act (2003), which in §1 states that:

The purpose of this Act is to ensure public access to environmental information and thus make it easier for individuals to contribute to the protection of the environment, to protect themselves against injury to health and environmental damage, and to influence public and private decision-makers in environmental matters. The Act is also intended to promote public participation in decision-making processes of significance relating to the environment.

The environmental information act applies to the Norwegian government agencies and for businesses that are established in Norway. This mean that all costumers to businesses established in Norway can demand information on the life cycle environmental performance of any product. In order to be effective, this act thus requires engagement from the end users of the product and/or environmental organisations. However, this is not (yet) a common consumer practice according to our informants in the retail-clothing sector. According to representatives from the environmental organisations a reason for this is that the retailers are not themselves always aware of the chemical content of their textiles and they will thus not be able to provide an answer to the consumer.

The Norwegian regulations have to a great extent been harmonised with EU regulations. In Norway, the Climate and Pollution Agency (CPA) are responsible for the enforcement and control of the existing regulations. When asked if the industry takes the environmental problem seriously, with regards to use of both legal and non-legal chemicals, our informant from the CPA answers that it varies to a great extent within the industry:

I don't work directly with control, but the signals that I have been receiving indicate that some takes it very seriously and others are not that serious about the issue. Some have good routines and others don't, it is as simple as that (CPA 2011).

The informant continues by emphasising the important role played by the industry itself and the need for industry initiatives, and hence places much of the responsibility on the textile industry:

Personally, I work with the List of Priority Substances, substances that we know are in circulation and that we would like to reduce the use and emission of. This is one of the reasons for us to participate in the work undertaken by the textile industry and to inform and educate the firms on the question of issue...The industry itself has developed the Restricted Substances List of chemicals, and we have supported them. It is mainly the industry itself that develops methods for communication that are practical for them to use. We contribute with information about the law and regulations and which chemicals we perceive as problematic (CPA 2011).

Some of the chemicals on the Restricted Substances List are prohibited to use globally or in some areas, others are restricted (in textiles or for other use) and some are not regulated at all, but are substances which are known to be problematic for health or the environment. We participate in the quality assurance of the list and provide input regarding new substances by for example giving the industry information about upcoming regulatory or classification work (CPA 2011).

According to our informant the CPA do test some samples from the market from time to time (e.g. Klif 2011), but the regulations are difficult to enforce because it is practically impossible to control everything that is imported to Norway. One solution is therefore to focus on facilitating information and to make the industry accountable. As we will discuss further, the CPA is also financially supporting projects that tests chemical content of textiles that are conducted by NGOs like the Global Action Plan (GAP) Norway.

#### *Available tools*

As we have already illustrated, the government's available tools are, according to themselves, limited by international trade regulations. The regulation of chemicals in textiles that applies in Norway and in the EU is also hard to enforce because of the limited possibility to control the great amount of textiles imported. According to themselves, the Climate and Pollution Agency does however play an important role informing and educating both the industry and the consumers about the regulations in general and hazardous chemicals in specific.

*Funding of Eco-Labels and Other Voluntary Initiatives*

An important tool emphasised by informants in the Ministry of Children, Equality and Social Inclusion as well as by informants in the Ministry of Environment is financial support to voluntary initiatives like eco-labelling. The Foundation for Eco-labelling, which manages the official Nordic eco-label the Nordic Swan and the EU-flower, received in 2010 4,677 million NOK (approximately 654 000 Euro) from the Ministry of Children, Equality and Social Inclusion, and 1.05 million NOK (approximately 143 000 Euro) from the Ministry of Environment. In addition to this direct funding, the Foundation for Eco-labelling received 1.85 million NOK (approximately 251 000 Euro) through state funded projects (the Foundation for Eco-labelling 2010:17). When asked about their relationship to the Foundation for Eco-labelling, one of the informants from the Ministry of Environment said the following:

The Ministry of Environment gives funding to the Foundation for Eco-labelling each year... this is to support Nordic Eco-labelling's work on developing environmental criteria for important product groups, and to make the Nordic Eco-label known as the preferable alternative among producers and consumers... We have a good relationship to them, and it is an important political tool (Ministry of Environment 2011).

This view is supported by the informants from the Ministry of Children, Equality and Social Inclusion who also emphasise financial support to the Foundation for Eco-labelling as one of their two main initiatives to increase the sustainability of the textile industry. The other initiative they support is the Textile Panel, a discussion forum for the textile-related industry, NGOs, research and educational institutions. The textile panel received 190 000 NOK (approximately 25 700 Euro) from the Ministry of Children, Equality and Social Inclusion in 2011. The Ministry's reason for funding the Textile Panel is to increase industry engagement:

We see the initiative as an opportunity to get attention, and to create initiative from the industry itself. We think that we can support the initiative in the start-up period, but after that they will need to find other ways to fund the initiative (Ministry of Children, Equality and Social Inclusion 2011).

In addition to giving financial support to the Foundation for Eco-labelling and the Textile Panel, the Ministry of Children, Equality and Social Inclusion gives funding to various projects and NGOs working with sustainability and consumer issues. The informants from the ministry

specified that it is not possible for them to regulate which products that can be bought in the stores, and that their role is rather to facilitate information:

We have had the attitude that we facilitate information, and hope that the consumers take the right choices (Ministry of Children, Equality and Social Inclusion 2011).

This final quote indicates that the government places much of the responsibility on the industry and on the consumers. The government's role is, according to themselves, to facilitate information through funding eco-labelling initiatives and industry initiatives like the textile panel, so that both the industry and the consumers can take the responsibility that is expected of them.

*Green Procurements: A Window of Opportunity for Eco-Labels*

In addition to voluntary initiatives like eco-labels and information campaigns, several informants mentioned green procurement as a valuable tool for the government in order to increase the sustainability of the textile supply chain. Green Public Procurement (GPP) is a part of the national strategy for sustainable development in Norway, and it has become a national policy through legislation and other government initiatives (Fet et al 2010:183). Green Public Procurement (GPP) is defined by Bouwer (in Fet et al 2010:184) as:

the approach by which Public Authorities integrate environmental criteria into all stages of their procurement process, thus encouraging the spread of environmental technologies and the development of environmentally sound products, by seeking and choosing outcomes and solutions that have the least possible impact on the environment throughout their whole life cycle.

Public authorities are major consumers in Europe, spending about 16 percent of the EU's gross domestic product (The European Commission in Fet et al 2010: 184), and green procurement can thus make an important contribution towards sustainable development. In Norway, the Agency for Public Management and eGovernment (DIFI in Norwegian) is responsible for coordinating and implementing the purchase policy. Green procurements are highlighted by informants from the Ministry of Environment as a substitute for the lacking regulation:

DIFI has developed environmental criteria for public procurements of textiles. Large amounts of textiles are bought for hospitals, the Norwegian Armed Forces etc. and environmental considerations

shall be taken when managing these procurements... For products where the Nordic Swan has established environmental criteria, these shall be emphasised in the procurement requirements (Ministry of Environment 2011)

This subject is also touched upon by the Initiative for Ethical Trade, arguing that green public procurement might have a significant effect on the use of eco-labels and/or environmental standards:

From my point of view it looks like standards and certifications make it easier for the industry to document that they fulfil certain requirements for public procurement. It can still be very problematic to only look at the bright side of use of standards in public procurement, as it would be very costly to hire consultants to certify all goods. We are committed to also investigate other options that would ensure high environmental properties at lower costs (IET 2011).

If the EU decides to set some green standards for their public procurement processes, it is evident that this will have an effect for the use of eco-labels. Public sector is a very important customer, and many would be interested in delivering to big customers like that (IET 2011).

#### *Responsible actors and good solutions*

The on-going free trade negotiations, the existing WTO regulations and restrictions through the Agreement on Technical Barriers to Trade (TBT) clearly affect the Norwegian government's scope of action and the conditions for labelling. On the one hand, the limitations in the existing regulation of sustainability issues regarding textiles makes it possible for labelling initiators to identify and frame shortcomings and failures of the existing regulation, which functions as a motivation for other regulatory initiatives like eco-labelling (Boström and Klintman 2008:95). Based on the existing rules and international regulation, representatives from several Norwegian governmental ministries argue that voluntary initiatives like eco-labelling is a good solution as an addition to the existing regulation. By doing this they are placing much responsibility on the industry and the corporate retailers and finally on the consumers who will buy the eco-labelled products. A problem with this approach is that per now very few eco-labelled garments are available at the market. With little information about the environmental impacts of the textile production and few eco-labelled textiles available for purchase, the consumers have little opportunity to take on this responsibility.

Through regulations like the Environmental Information Act, the government also places some responsibility on the consumers, who are required to take action against the corporate retailers which have a responsibility to facilitate environmental information about the production process. In addition to the perception of the corporate retailers and the consumers as the (most) responsible actors, the informants representing ministries and government agencies also place some responsibility on the government - mainly as the facilitator of information and support to the industry and the consumers, but also through an increased focus on public procurement of eco-labelled textiles.

According to Boström and Klintman (2008:90), political and regulatory bodies' "readiness to support" – to accept or assume a strong role for private actors and non-state labelling initiators is important for the potential success of labelling. As identified in the Norwegian case, the government is willing to support through funding of eco-labelling and other information initiatives, participating as knowledgeable actors in standards development and through public procurement of eco-labelled or "green" products. This practical support of the eco-labelling initiative is an indirect way of giving symbolic support, which entails legitimising green labelling indirectly (Boström and Klintman 2008:91).

The Norwegian government does not place any substantial pressure on the corporate retailers or other parts of the textile industry, but the informants do however argue that the industry need to take on the responsibility for improving the sustainability of the textile supply chain. The informants reduced the government's responsibility to mainly provide information and financially support organisations providing information to the consumers and the corporate retailers as well as financially supporting the official labelling initiative, the Foundation for Eco-labelling.

### *The Role of Corporate Retailers and the Textile Industry*

The retail-clothing companies interviewed claim that they don't experience a strong pressure to strengthen the environmental requirements on their products, neither from the government, environmental organisations nor from the consumers. Informants representing the government ministries and agencies argue that the industry itself need to take on the responsibility for improving the sustainability of their supply chain, and the retail-clothing companies we have talked to are to a varying degree taking measures to do this.

In this section we will illuminate some of the measures being taken by the industry and their motivations to take measures despite the lack of

pressure from other stakeholders. Lastly, we will elaborate on the retail-clothing companies' thoughts on eco-labels as a potential solution. In this section we will refer to interviews with the retailers H&M, the Varner Group<sup>3</sup> and Voice Norway<sup>4</sup> and the industry representatives the Federation of Norwegian Enterprises. Voice Norway was interviewed in this project in the end of August 2011. Since then the company has expanded its work on sustainability and CSR. In this section we will therefore both refer to quotes by the informants from Voice Norway from the interview in August 2011 and from updates and corrections made in December 2012.

### *Industry Initiatives Illuminated in the Interviews*

#### *Focus on the use of chemicals in the production*

Together with the Climate and Pollution Agency<sup>5</sup> and the Varner Group, the Federation of Norwegian Enterprises has developed a chemical tool for textiles. This is a voluntary measure intended to educate the corporate purchasers about chemical substances used in the production and to limit the use of certain chemicals. The tool outlines supplier requirements and an accompanying guide for purchasers is developed. The tool is freely available on the Federation of Norwegian Enterprises' webpage and has been made public through the Textile Panel. The informant from the Federation of Norwegian Enterprises is unsure about how many companies that is actually using it, but emphasise that they through this initiative manage to place focus upon the problem of hazardous chemicals in textiles. One of the retail-clothing companies using the tool is the Varner group which also contributed to developing the tool. According to our informant from the Varner group the introduction of the tool has triggered new initiatives:

We have implemented the chemical tool for textiles, and we see positive results as well as things that need to be improved and done differently. We have therefore created a procurement forum consisting of coordinators from each chain, where they can discuss their problems related to CSR [corporate social responsibility], social issues as well as use of chemicals in the production. We have

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3. The Varner group consists of the following stores: BikBok, Carlings, Cubus, Dressmann, Dressmann XL, Levis, Solo, Urban, Vivikes, Volt, WOW, Warehouse Outlet (Varner group 2011).

4. Voice Norway consist of the following stores: Boys of Europe, Vic, Match (Voice Norway 2011)

5. The Climate and Pollution Agency contributed financially to the development of the chemical tool.

also developed some new tools internally and we have created a document for use by the purchasers (Varner group 2011).

As part of their work on CSR the Varner group has also opened an office in New Delhi, in order to be better able to monitor and follow up their suppliers on questions regarding workers' rights as well as environmental questions. According to our informant, they are following the production and their products until they are being shipped.

Like the Varner group, other retail-clothing companies interviewed in this project have included the Restricted Substances List in their codes of conduct and their work on corporate social responsibility. The global retail-clothing company Hennes&Mauritz has developed its own restricted substances list (H&M 2009). According to H&M tens of thousands of tests are carried out each year in an effort to ensure that the clothes do not contain these chemicals in harmful quantities (H&M 2010). A smaller corporate retailer, Voice Norway, claimed in 2011 that they do not have the opportunity to do tests themselves but that they use external laboratories and that they follow the same lists as other retailers:

H&M is the leading actor within the part about restricting the use of chemicals, and they have chemicals on their lists that the EU doesn't have on theirs. We follow lists of restricted substances as well, but we don't have the same opportunity to have our own chemistry lab (Voice Norway 2011).

By December 2012 the work on CSR had been strengthened within Voice Norway, especially regarding the use of chemicals:

Voice Norway's suppliers have all signed the chemical regulations for import of textiles to Norway. In addition to this, Voice Norway use the Restricted Substances List developed by the Federation of Norwegian Enterprises and are conducting spot checks by using laboratories in Sweden. We are now conducting a thoroughly chemical training of all our purchasers and we will improve the monitoring of use of chemicals in 2013 (Voice 2012).

The focus on restricting the use of chemicals in the production and traces of restricted chemicals in the products seem to be the main environmental issue concerning the informants from the textile industry. Lists of restricted chemicals are well known among the retail-clothing companies and the companies interviewed in this project all claim to have requirements for their suppliers. As described previously in this report,

restricting use of hazardous chemicals has also been the focus of the EU and Norwegian (law-based) regulation.

### *The Textile Panel*

With funding from the Ministry of Children, Equality and Social Inclusion, the Norwegian Textile Panel was re-established in 2011. As mentioned, the panel functions as an arena for discussion and knowledge exchange. The textile panel is based upon cooperation between several industry representatives, government representatives, labelling institutions etc. Both Voice Norway, the Varner group and the Federation of Norwegian Enterprises is participating in Textile Panel, and mentioned this as one of the important industry initiatives currently being taken.

### *Use of Eco-labels*

When asked if they use eco-labels on their products, all the retail-clothing companies we talked to mentioned that many of their suppliers are certified according to Öeko-tex standard 100. As it was also argued by the informants, this is however not an organic or an environmental label. The label certifies that the textiles are tested for harmful substances, including substances that are prohibited by law, regulated by law and substances which are considered to be harmful to health, but which are still not regulated (Stø and Laitala 2011). According to informants from Voice Norway it gives no competitive advantage to use the Öeko-tex 100 label:

This is a typically “nice to have” label because it is very easy to get. It is not hard to be certified according to Öeko-tex 100. Certification according to Öeko-tex 100 is almost a given, and we have actually chosen not to use the label on our products even though we could have used it (Voice Norway 2011).

This is also the case for H&M which argue that they do not use the Öeko-tex 100 label on all their garments that are fulfilling the requirements of the standard. This can be interpreted as a signal that the Öeko-Tex 100 requirements have been harmonised with the standard practice and that it is more or less taken for granted that the garments sold today satisfy the standards set by Öeko-tex 100. Another way to interpret the lack of competitive advantage by using the label is that the consumers do not care whether the garment is labelled as a better alternative. The consumers’ perceptions of the relevant eco-labels are presented in the third report to this project which is based on a European consumer survey

on environmental standards and the use of eco-labels on textiles (Austgulen 2013).

Voice Norway does not use any eco-labels on their garments (yet). One reason for not doing this may be that they do not sell clothing to children under the age of six, and they only have a small test collection for children between six and twelve. Both the Varner group and H&M do sell some garments labelled with the EU-flower. However, the majority of garments labelled with the EU flower is children's and baby garments, and the main target group for eco-labelled clothing are parents with small children:

We do have some use of the EU flower, especially on children's garments on Cubus [on of the stores within the Varner group], and our experiences with this are positive...It is especially mothers with small children who are in the category for whom we do offer garments labelled with the flower, and we see that this engages the costumers in this target group... this target group is willing to pay a bit extra for this type of garment (Varner group 2011).

We have chosen to focus on baby products as the EU flower label guarantees consideration of environmental aspects, but also a production process free of hazardous chemicals. That is the standard that we apply to all our products, but of course buying products for babies is something that you are more concerned of and such labels can give you more security (H&M 2011).

This indicates that there is a market for eco-labelled T&C for small children and babies, but according to our informants the potential for expanding the use of eco-labels to clothes for older consumers is limited:

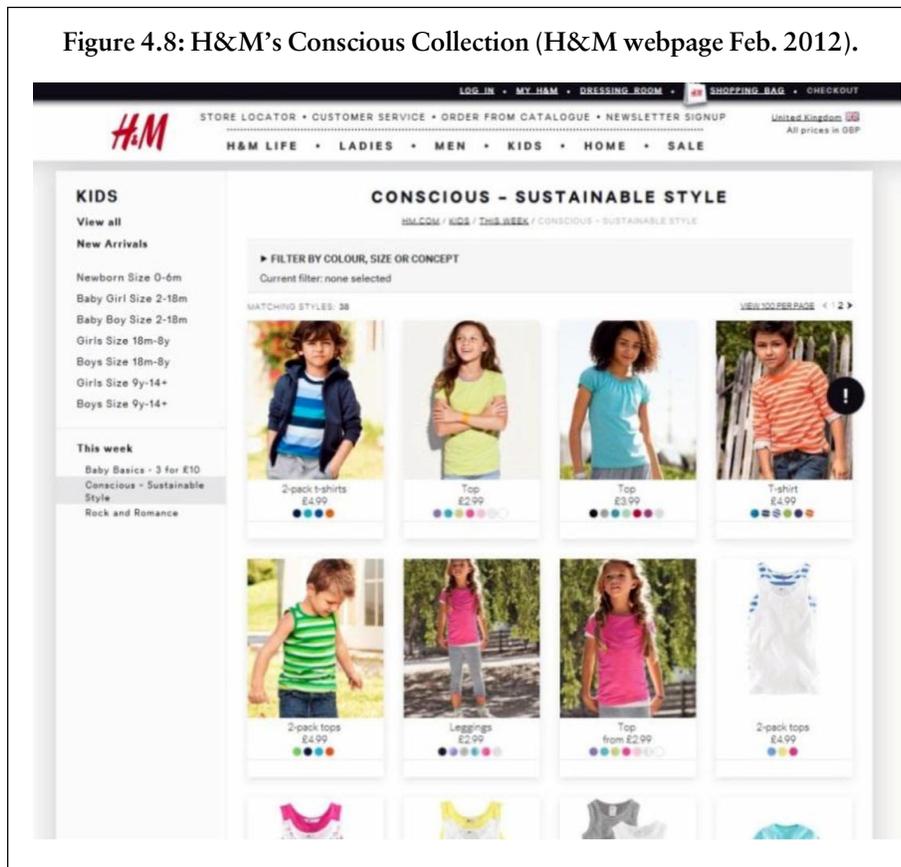
We have tried to make more environment friendly collections, but the costumers do not respond to it, so our experiences are a bit mixed. We wish to continue with the most appropriate target group, like children's garments and close-to-skin products. Men in their 40's are not the main target group - they are not the ones requesting eco-labelled products (Varner 2011).

Despite the lack of eco-labelled clothes offered to other consumer groups than small children and babies, an increased focus on sustainable clothing within the industry is emphasised by some of the stakeholders, and sustainable collections made of fibres like organic cotton and recycled polyester is, among others, promoted by H&M.

*Increased use of Organic Cotton*

H&M are the biggest user of organic cotton on the textile market (Textile Exchange 2011), and according our informant representing H&M the use of organic cotton has been a success. The global retail-clothing company introduced its first collection based on sustainable materials with the Garden collection in 2009, and continued with the Conscious collection in 2011. The products in this collection are made out of more sustainable raw materials like organic cotton, organic linen, recycled polyester and Tencel. When introduced, the collection contained clothing for women, men and children as well as so called “home” products like bed linen. In 2012 the main target group were children, and the collection no longer included any garments for men. The amount of garments in the collection is however limited and only included 38 garments for children in February 2012 (online) (H&M 2012).

Figure 4.8: H&M’s Conscious Collection (H&M webpage Feb. 2012).



According to our informant, H&M do not charge higher prices for products made by more sustainable materials like organic cotton, and the major selling point is not that it is made by more sustainable materials:

We do not offer this with a major selling point that the product is organic cotton. It is a fashionable garment, and people would buy it either way, but it can add value to it that it is organic cotton (H&M 2011).

This quote further strengthens the impression that the pressure from the consumers are low, and it leads us over to the next section of the report which deals with the retailers' motives for implementing environmental measures.

### *What is motivating the companies when pressure is lacking?*

In this section, it is not our goal to analyse the business strategies of the retailers interviewed in this project, but rather to give an impression of which factors that are motivating them to procure more eco-friendly garments and to use eco-labels.

#### *A feeling of responsibility*

The first factor, stated by all informants representing the retail industry, is their responsibility to improve the environmental standards in the supply chain. All companies interviewed focus on corporate social responsibility, and have developed their own codes of conduct and corresponding lists of restricted chemicals. The informants from Voice Norway argued as follows in 2011:

We feel that there is a growing interest in the society, and we ourselves are interested in having more control. We have good suppliers, who are collaborating with some of the biggest and the best [retailers] in the industry, but we feel that we need to have more control in the time to come... Voice has a social responsibility, which means that we must go from, not being passive, but to go from signing documents and trust that they are being followed, to be active in the process with active controls (Voice Norway 2011).

The follow up of Voice Norway in 2012 signalled that they are serious regarding their intentions of being more active as they claim to have increased the efforts of controlling the use of chemicals.

*Added value*

Another important motivation for the corporate retailers to produce more eco-friendly garments and to use eco-labels is the competitive advantage it may give compared to other companies. Of the companies interviewed in this project, H&M has distinguished itself as the most active corporate retailer in this regard. H&M underlined the competitive advantage and their own economic interest as important motivating factors:

There is also an own interest, an economic interest, in being resource efficient and not wasting resources. For example: conventional cotton production is water and chemical intensive, and we are experiencing increasing prices on fertilisers and pesticides which is driving up the prices on cotton. I think there are various measures where environmental protection makes sense (H&M 2011).

There is an interest from our consumers, otherwise we would not be able to offer it, but we also see that it gives added value to the product. The business idea that has made us successful is to give our customers fashion and quality at the best price. And we always want to offer our customers the best value for money. We see that for example that offering comparable garments made by more sustainable materials is an added value that gives us competitive advantage compared to other companies that do not offer that value (H&M 2011).

Informants from within the textile industry also emphasise H&M's competitive advantage. Voice Norway focus on H&M's Conscious collection when they argue that the small amount of organic cotton on the market, and the fact that H&M purchase almost everything there is, gives them a competitive advantage:

We know the Scandinavian textile industry well and there is an extensive interest in buying organic cotton, but H&M has bought a major part of it during the last three years. They have a kind of monopoly on organic cotton on the market, and that develops to be a competitive tool (Voice Norway 2011).

We think that there is a significant potential in organic/ecological fashion. However, this far it has proven to be difficult for actors our size in the textile business to make organic/ecological fashion work commercially (Voice Norway 2012).

The informant from the Federation of Norwegian Enterprises also highlights this perspective:

As far as we know, some large retailers are using eco-labels. This can give them a competitive advantage and, when they are operating alone, much free attention. It is clear that this is a motivational factor for the retailers (Federation of Norwegian Enterprises 2011).

This illustrates that even though the informants representing the textile industry argue that there is little pressure from the consumers and other stakeholders, they still see it as a competitive advantage to use eco-friendly materials and to use eco-labels on selected garments. This leads us to the next motivational factor, image building and reputation.

#### *Image building and reputation*

Even though the pressure from consumers, the government and other stakeholders are fairly low, it is important for the corporate retailers to have a good reputation, and they do not want to be connected to scandals like the Brent Spar scandal in 1995 and the Nike sweatshirt scandal in 1997<sup>6</sup>. A company's reputation is hard and time-consuming to build up, but it only takes one scandal to destroy. One impression we got through the interviews with the industry is that the companies are enhancing their environmental focus as a preparation for the future. This was also directly confirmed by H&M:

It is of course a preparation for tomorrow, and we think that it will become an even more important factor in the future. Especially when we see that there are many companies offering fashion at good prices today, we think that we can add further value to it [their products] to make a difference compared to our competitors (H&M 2011).

This attitude is confirmed by the Ethical Trading Initiative which argues that there is a cost connected to being a market leader, and refers to the Nike sweatshirt scandal in 1997 where NGOs deliberately directed its attention to Nike because they were the market leader. According to the Ethical Trading Initiative, scandals – and the fear of them – are important drivers for change in the textile industry.

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6. These scandals were not connected to environmental issues, but serves as examples of how important social issues might be for a company's reputation.

### *Responsible actors and good solutions*

As answer to a question of how far we and people in the producing countries are willing to go when it comes to pollution of local rivers etc. our informants from Voice Norway places some responsibility on the governments:

Something needs to happen at the political level, there is a need to pressure the politicians to change the law. We are obliged to follow the laws in our own country and where we produce (Voice Norway 2011).

The government's responsibility is emphasised by several informants focusing on the complex structure of the textile industry. The Federation of Norwegian Industries argues that the competition between the global retailers can represent a challenge for environmental improvements in the industry:

The textile industry consists of many actors, from tiny proprietorship to large retailers like H&M and the Inditex group that are larger than H&M globally. These retailers don't cooperate. They are competitors, and they cannot agree on size labelling or environmental requirements. The environmental requirements must therefore come, either from local governments or from governments in the producing countries (Federation of Norwegian Industries 2011).

Thus, even though the retailers and the Federation of Norwegian Industries in general are sceptical towards government regulations of the industry, they argue that this at least have to be a part of the solution to the environmental challenges the industry is facing. As indicated previously in this section, the industry has already taken several initiatives to improve the sustainability of their supply chains and large retailers like H&M, Adidas, C&A and several others have established the Sustainable Apparel Coalition. The Sustainable Apparel Coalition's first major project is to develop a common, industry-wide tool for measuring the social and environmental performance of apparel products and the supply chains where they are produced: the Higg Index (Sustainable Apparel Coalition 2012). Initiatives like this indicate that the industry perceives themselves as responsible actors, and it also indicates that they don't necessarily perceive eco-labels as the best solution. This leads us to the next section where the industry's attitude towards eco-labels is presented.

*Eco-labels as a solution?*

When discussing whether eco-labelling is a good solution, the fact that the industry does not experience a pressure from the consumers for eco-labelled products is important. In the following quote this is emphasised by the informants from Voice Norway:

It is not a sufficient demand for eco-labelled clothes neither from our customers nor from our franchisees. Our customers are most interested in us producing fashionable collections (Voice Norway 2011).

This lack of pressure does however not seem to be the biggest obstacle for the use of eco-labels. As described earlier in this report, the industry representatives argue that eco-friendly products are a competitive advantage and that there is a market for eco-labelled products for children and babies. The fact that the availability of the products is low can also be seen as a reason for the lack of consumer pressure. When asked about their attitudes to eco-labels, the business representatives also chose to highlight other aspects that they considered to be negative. The most important factor emphasised by our informants is the problems connected to use of eco-labels as an active part of their marketing strategy. First of all, Voice Norway argues that the media is a negative factor when it comes to using eco-labels:

If we should go that way [use organic cotton etc.] and use it for marketing purposes, then the media is a negative factor in Norway. They are only searching for mistakes in that kind of projects. Thus, in order to go through with a project like that one would need to have absolute control through all the stages of the production (Voice Norway 2011).

However, according to the informants from Voice Norway it is almost impossible to have this necessary control of every aspect in the supply chain. This was also mentioned by the Varner Group, who argue that it is difficult to give the consumers a guarantee, and that they never can be 100 percent sure that everything is okay:

As long as there are people in the picture, it is impossible to say that everything is 100 percent [ok], and that is why I don't like the word guarantee. This is also the danger of labels in itself, that it give a kind of stamp, and that can say a lot, but it can never give a 100 percent guarantee as many might think they do when they buy labelled products (Varner group 2011).

Another reason highlighted by the Varner group is that it is difficult to use the labels actively in their marketing strategy because people tend to misunderstand the eco-labels and think that they include other aspects as well.

We are by no means against eco-labels in general, but to strongly embrace one and use it actively in the marketing of the products is a bit difficult because the customers does not really understand the meaning of the different labels, and you often sell a guarantee that is not real. People misunderstand eco-labels and think that it includes other aspects as well. We experience this as a bit problematic, that we “trick” our customers to buy something else than what they actually buy. The bottom line has always been that the company brand shall be an assurance in itself - everything else is a bonus (Varner group 2011).

Lack of information and knowledge among the consumers can therefore be considered as a reason for why the businesses are sceptical towards the use of eco-labels. This lack of knowledge can however (partly) be explained by the problems facing the industry in order to decide which label they would like to use. During the period in which the stakeholder interviews were conducted the environmental requirements for the Nordic Swan were on consultation and hence they were discussed among the different stakeholders. The Federation of Norwegian Enterprises argued that if Norwegian retailers were to use the Nordic Swan, the requirement regarding organic materials need to be reduced. Another problem with eco-labels emphasised in the interviews is that there are too many of them. Here exemplified by the informant from the Varner group:

Better coordination between the labels would have been nice, so that the customers had only one label they needed to relate to (Varner group 2011).

But this strategy seems to be problematic when large retailers like H&M requests global labels:

It is essential for us, as a globally present company, that labels are globally applicable and globally known among consumers. We do use different labels on our garments, but we mainly use the EU flower (H&M 2011).

As described previously in this report and by Stø and Laitala (2011), a range of eco-labels for textiles do exist, and some of them are of a global

character. When asked if they use one of the largest global organic labels, GOTS, H&M argued that the process is too complex and time consuming:

We have tried the label on some of our garments, and we could have used it for some more garments, but there are some issues: it is a very complex and time consuming certification process which is not always easily applicable or usable in our business where trends happen fast etc. So we can use it for some garments, but we can't use it for all by now (H&M 2011).

This illustrates the complexity of creating good eco-labels and some of the challenges that are facing the labelling institutions, the governments, the NGOs and the textile industry. In the next section we will present the views of the labelling institutions interviewed.

### *The Role of Labelling Institutions*

The labelling institutions interviewed are experiencing some interest from retailers and producers worldwide and according to them the interest is increasing. As mentioned, few eco-labelled garments are currently available for purchase but according to the informants from the labelling institutions we are now witnessing the beginning of the process of eco-labelling of textiles. During the period in which the interviews were taking place the Foundation for Eco-labelling Norway were experiencing some pressure from industry representatives regarding the requirements of the Nordic Swan's standard for textiles. However, they were not experiencing a significant pressure from consumer groups. In the following sections we will elaborate on the two labelling institutions', GOTS and the Foundation for Eco-labelling Norway's, experiences with and thoughts about eco-labelling of textiles. The two institutions are quite different. GOTS is a relatively new global label which is solely focussing on textiles, while the Foundation for Eco-labelling is governing both the Nordic Swan and the EU Flower in Norway. Both the EU flower and the Nordic Swan are labels that are used on a multitude of product groups where textiles are one of them.

### *Main challenges*

#### *A jungle of labels*

In the first report from this project (Stø and Laitala 2011), we identified a large number of relevant labels for the textile sector. It is worth mentioning the classical eco-labels such as the Nordic Ecolabel and the EU Flower and organic labels like GOTS and the Swedish Krav.

Furthermore we have seen many initiatives taken within the textile sector, like the Cradle-to-Cradle certification and the Better Cotton Initiative. Other relevant dimensions are the social aspects like Fair Trade and the health dimension that are the main focus of the Oeko-Tex 100 label. In order to understand the labelling institutions' positions, representatives from GOTS and the Foundation for eco-labelling in Norway were interviewed in this project.

A challenge often emphasised is that there is a "jungle of labels" out there. As indicated earlier in this report this represents a challenge for the retailers, and it might as well represent a problem for the consumers. Both GOTS and the Foundation for eco-labelling in Norway are working to reduce the jungle effect.

The GOTS strategy is to develop a global label focussing on textiles only. The GOTS label is a result of cooperation between the Soil Association (SA), the International Association Natural Textile Industry Germany (IVN), the Organic Trade Organisation USA (OTA) and Japan Organic Cotton Organisation (JOCA) and represents a harmonisation of standards in itself. It is not a very well-known label among the consumers (Austgulen 2013), but this specific scheme has only been active since 2006. It takes time to build a network as well as trust among the textile industry, the retailers and the consumers. According to our informant representing GOTS, this label does not have any real competitors on the market and GOTS do not have any problem with recruiting producers:

So far it has not been a problem to find businesses to certify. Since the start in 2006 we have experienced that manufacturers have contacted GOTS, in order to be certified (GOTS 2011).

It does not compete with other eco-labels as most of them do not focus on the organic production of textiles. Despite their short history GOTS has already certified close to 3000 businesses in 57 countries of which India is the leading country (GOTS 2011).

The informants representing the Foundation for Eco-labelling in Norway are not equally satisfied with the new eco-labels and organic labels (for textiles). According to the Foundation for Eco-labelling Norway the high amount of eco-labels confuses the consumer and presents them with the choice of e.g. either selecting organic, eco-labelled or fair trade products. This is especially the case for general claims about products being eco-friendly and self-classified eco-labels - ISO-type II labels. According to the informants from the Foundation for Eco-labelling in Norway the solution is to strengthen the generic labelling scheme's requirements. The Foundation for Eco-labelling in Norway is organising

both the Nordic Swan and the EU Flower in Norway. However, their main focus is placed on the Nordic Swan, as this label is already well established on the market and well known among Nordic consumers. This strategy thus contradict with the needs of the global clothing-retailers like H&M asking for a global label rather than national and smaller regional labels like the Nordic Swan. Another challenge facing the existing labels is their high requirements. The requirements are discussed in the following section.

### *High requirements*

Both GOTS and the Foundation for Eco-labelling in Norway recognise the environmental impact of textile production of different types of fibres. This is reflected in the criteria development. One important fibre which has been the subject for much discussion regarding its environmental impact is cotton. One of the strategies used by global retailers is, to increase their use of organically produced cotton. For cotton the main strategy has been to increase the production of organic cotton because the environmental impact of organic production is argued to be substantially lower than the conventional. However, this has been a problematic strategy partly because the organic cotton production actually decreased in 2011. According to Textile Exchange (2011:6) the organic cotton production was down 37 percent in 2011, despite the fact that 81 percent of brands and retailers responding to the Textile Exchange (TE) 2011 Market Survey indicated that they planned to expand their use of organic cotton.

It is however possible to be GOTS certified on two levels. The first level, which is the organic label, presupposes at least 95 percent of organic fibres. The second level, which can't be labelled as organic but labelled with the percentage of organic fibres, presuppose at least 70 percent of organic fibres. The other 30 percent at this level can be made of conventional fibres, but only 10 percent can be of regenerated synthetic fibres with exception for socks and sportswear, where it is allowed to use 25 percent of regenerated synthetic fibres.

For The Nordic Swan the question of 100 percent organic production has been put on the agenda. There are two reasons for this discussion. First, the Foundation for Eco-labelling in Norway has been under pressure from the industry to lower their requirements, and is listening to the arguments from the industry. Secondly, the Nordic Swan has also witnessed that the volume of labelled products and the market shares are marginal:

The criteria may be too exclusive. The environmental effect is limited... We also see that GOTS has reduced their percentage of

organic cotton requirement (Foundation for eco-labelling in Norway 2011).

There are reasons to believe that the Foundation for Eco-labelling Norway is looking over the shoulders to other labelling institutions, and not only at GOTS. The Swedish KRAV has strong organic requirements while the EU Flower, so far, has not included organic production in their requirements for textiles. The Nordic Swan will probably develop their strategy in accordance to the activity of other labelling institutions.

*Lack of consumer engagement*

The two labelling institutions agree that it is difficult to identify any consumer pressure in the market for eco-labelled textiles and clothes. According to the informants the reason for this is probably that the environmental impact of textile production is not a priority among the consumers. On the other hand there might be an understanding about the problematic aspects of chemicals in the production process, but the concern may be caused by health considerations rather than from environmental considerations:

But then it is first of all the health aspects that are important for people. I think that it will take some time before we create an understanding that the pollution actually takes place in India, and that this is a large problem for the Indian producers. Here we still have a lot to communicate to the Norwegian consumers (Foundation for eco-labelling in Norway 2011).

It is probably also the health aspects that are relevant for the consumer engagement regarding eco-labelled baby clothes. Within this area consumers have shown willingness to pay:

But if we shall look at places where we have seen tendencies to a break-through, it must be for baby-clothing and children clothes (Foundation for eco-labelling in Norway 2011).

This is confirmed in the interview with GOTS. However, GOTS seem to be more optimistic than the Nordic Swan that substantial changes will take place:

The feedbacks we have received from the consumers are that they are relieved that there now is one common label for organic textile production (GOTS 2011).

Considering the limited availability eco-labelled textiles in the stores this seems to be very optimistic, at least for describing the Norwegian situation. However, this statement takes us to the next section, who do they perceive to be the responsible actors and what are the good solutions?

#### *Responsible actors and good solutions*

It is not a surprise that the two eco-labelling institutions regard eco-labels, certified by a third party, as a vital tool in the market communication between producers and retailers on the one hand and consumers on the other. Furthermore, that the eco-labelling institutions are the main responsible actors in this process.

However, it is possible to identify some differences between the two institutions. First of all, GOTS seem to be more optimistic about the future of eco-labelled textiles than the Foundation for Eco-labelling Norway. They have witnessed a substantial growth in certified producers during the last six years and according to them this will, sooner or later, also change the textile market. The Foundation for Eco-labelling Norway shares the same visions, but is more pessimistic about the near future. The main reason for this scepticism is the lack of political involvement from governments and that the global market actors tend to communicate to the consumers through their own brands and with their own eco-certification and labels. Responsible actors, such as public authorities and the leading textile businesses have been active as far as the use of chemicals in the textile industry are concerned. However, they have not shown the same engagement regarding use of eco-labels in the textile value chain.

One aspect that is often problematised is the multi-dimensional aspects of clothes. Do eco-labels really have a potential to reach out to the majority of consumers? When buying clothes we also have to take sizing, design, fashion, colours and price etc. into consideration, and these aspects can over-shadow the concern of environmental impact. The answer from the eco-labelling institutions is clear; the market will gain from increased use of labels on textiles in the communication with the consumers:

Such arguments are often used in the beginning of an eco-labelling process. All product categories are special. We have heard this for hotels, where the argument was quite similar, and for the paper industry, where arguments were quite different. The large investments were supposed to be an argument against labels for paper products. They have turned into successes anyway (the Foundation for Eco-labelling Norway 2011).

However, the structure of the textile industry may be a complicating factor for the success of eco-labels for textiles. As emphasised by H&M the fashion industry is characterised by quick decisions regarding design, shifting and varying collections and many products. The solution to this, emphasised by GOTS, is to certify the manufacturers and not specific products.

### *The Role of Design Institutions*

We have carried out interviews with two Nordic design institutions, the Norwegian Fashion Institute and 2025 Design, and one trade forum for cooperation, NICE – Nordic Initiative Clean and Ethical. These institutions represent an interesting trend within Nordic design emphasising sustainable fashion. NICE is focusing on environmental impacts of the textile industry and seeks to create arenas for discussing environmental questions with the design community and retailers among others. There are various arenas for sustainable design, and the latest was the Copenhagen Fashion Summit arranged by NICE in May 2012. We see an increasing interest and competence within the design communities and textile industry to promote green fashion, and among the speakers at this Fashion Summit were several representatives from the industry, head of networks and partnerships at the UN Global Compact office, a representative from Greenpeace International and several others.

### *Main challenges*

#### *Environmental challenges in the textile value chain*

Among these three representatives who strive for a more sustainable fashion industry, there is a substantial knowledge of the environmental impacts of textile production and consumption. In addition to land use, pollution, pesticides, water use, energy and chemicals, the design community also focus on three other crucial factors, which were not equally strongly emphasised by the other informants:

- The large *amount* of textiles produced
- The environmental impact of the *use phase* of textile and clothes, and also the disposal phase
- The uncertainty linked to LCA-studies of clothes, especially the relationship between various fibres such as cotton, synthetic fibres and wool.

When the informants were asked about the environmental impact of the textile industry they emphasised the following:

There are so many different aspects that most companies don't know where to begin. The first one is the amount of clothes... The environmental impact will increase if the amount of clothes increases. You will gain from reducing chemicals and increase the use organic production, but this will not be seen on the statistical data (NICE 2011).

First of all clothes is one of the few products that are cheaper today than for 20 years ago. The fashion has been democratised; it is possible to buy branded clothes relatively cheaply. This has led to a disposing mentality among consumers (Norwegian Fashion Institute 2011).

When discussing possible solutions two main challenges were emphasised in the interviews. The first is the limitations of the organic cotton strategy. The informants all agree that organic cotton is significantly better than conventional cotton. However, the availability of organic cotton is limited and actually decreased in 2011 (Textile Exchange 2012). This means that it will take time to change the fibre production. A strategy that only covers the organic pathway will certainly have its limitations, even though there are many other organic fibres available. The consequences could be that other low-hanging fruits are not picked and more integrated solutions are not prioritised. The second challenge is the structure of the textile supply chain in itself. It does not only include the production of primary fibres, nor does it only include the processing of the fibres or the production of the garments. However, according to the informants the tendencies are to focus on single-dimensional aspects such as organic production or on the use of chemicals in the production. Such strategies might draw the focus away from a more holistic perspective, where an integration of various aspects is given priority. This takes us to the role of sustainable fashion.

### *Sustainable Fashion*

Sustainable fashion as a holistic approach is a part of a broader trend within sustainable design. It may contain various dimensions including renewables, carbon footprint, social responsibility within a life-span perspective and user friendly technology. Our informants from the design community belong to this tradition. It is still a niche within most industries, but represents an emerging trend within the textile industry. Within this holistic approach the designers play an important part. They contribute

not only by designing specific products, but are concerned about the entire production and distribution process. In many ways this can be interpreted within “ecological modernisation” theory.

This was clearly demonstrated in the interviews with 2025 Design, a Norwegian Cradle to Cradle partner. The idea behind this concept is to create the best products and avoid regulation. They also have a certification process, but this is not their main contribution. Their slogan is “remaking the way we make things”.

The role of sustainable fashion is to overcome the fact that the majority of consumers don’t care about the products they are buying. This is done by improving the production processes gradually, more or less as an internal discussion within the actual branches, in this case the textile industry and large international retailers. This is done by finding solutions within the supply chain:

If you manage to come up with a product that satisfies the requirements that you mentioned, sustainability, fashion and quality, then you have shot the golden bird... There is always a solution somewhere... With textiles it is possible to find innovation possibilities further down in the production process (Norwegian Fashion Institute 2011).

A challenge for this perspective is that citizens and consumers only play a marginal part in the play. This will be discussed further below, under the headline of eco-labels.

#### *The role of eco-labels*

Given this point of departure described above, it is no surprise that our informants are skeptical towards eco-labels. There are some differences between the perspectives of the three informants, but they more or less share the same perspectives:

- Eco-labels only cover a small part of the process
- They are not addressing the main challenges such as the use-phase and the increased amount of textiles
- They may have a negative effect on the innovation processes because the standards are not flexible
- If labels should be introduced, it should be mandatory and public labels, not voluntary agreements

In the words of one of the informants:

Labels are not the answer to the question we are addressing. It is often too expensive and involves extra bureaucracy. It is a burden for the textile industry... (2025 Design 2011).

The goal is not to label all products but to be innovative and to improve products. We want a more holistic approach to the entire production process (2025 Design 2011).

My attitude and way to work with these questions is to design good products. Of course these have to be declared by the industry, but not necessary by a third party (2025 Design 2011).

Another aspect in the discussion is the geographical limitation of many of the existing labels. The well-known labels are either national or regional (Austgulen 2013). They are trusted and well-known within a country or region, but are not available at the global textile market. This is a challenge they have to overcome. It is our impression that the design community here agree with the textile businesses regarding the need for a global system:

I think that the reason (for the large number of labels) is that no one has come up with a good alternative for textiles (NICE 2011).

Some initiatives have been taken to coordinate the labels, but the willingness to do so has been limited. One of the reasons for this hesitation is probably that the labelling institutions believe that their own criteria are the best. The results could be that the industry will develop their own labels, designed for their own needs. Initiatives have already been taken through the Sustainable Apparel Coalition, where many of the large brands and retailers participate. It started with business-to-business standards with sports clothing. According to our informants this cooperation has the potential to include the entire textile sector and expand to the business-to-consumer market:

The large companies have taken the spoon in their own hands. They are afraid that the political authority will intervene, by the use of the EU Flower or the Nordic Swan. They want to develop a system more suitable for their costumers and, of course, for themselves. They think that they know the textile industry better than the political authorities do (NICE 2011).

This quote illustrates that the industry are preparing themselves for potential future government regulations by enhancing their own work on finding potential solutions to environmental challenges facing the industry.

*Responsible actors and good solutions*

The differences in opinions between the three informants representing the design community were rather marginal. They agree on the environmental challenges facing the textile industry, the relevance of sustainable fashion and the limitation of eco-labels as a tool for change. This agreement also dominates their evaluation of responsible actors and most of all also the perceptions of good solutions.

There is an agreement among the informants that sustainable fashion or green design is a part of the solution to the environmental problems caused by textile production, and that this is not the case for voluntary eco-labels. However, there seems to be a disagreement on the role of governments. 2025 Design are sceptical to government involvement. However, the two other institutions argue more in favour of mandatory requirements. This do not seem to be an easy solution as there is an agreement among the informants that the political authority has not been visible enough regarding requirements for textiles. The government has left the arena to the labelling institutions (with government funding), to NGOs and to business initiatives.

Regarding the responsibility of the businesses and retailers there also seem to be nuances in their preferred strategies. 2025 Design emphasise that a lot of things are happening within the industry and the large multinational companies. On the other hand they don't seem to be very proactive, but are reacting on media coverage. NICE and the Norwegian Fashion Institute shares this argument, and emphasise the responsibility of the industry:

All actors in the value chain have a responsibility, but the global textile retailers and brands have to be the frontrunners because their foot-print are the largest and they thus have the largest responsibility to find proactive solutions (NICE 2011).

It is really interesting what happens in large companies like H&M, they are world markets leader in this regard (Norwegian Fashion Institute 2011).

Regarding the consumers there is an interesting difference of opinion among the informants. 2025 Design has identified an increasing consumer interest in the topic, while the two others are less optimistic about the consumer contribution:

Consumers have been more and more aware about the problem, and this is especially the case for athletic apparel. It can be recognised in the way they talk about textiles. But they are still not willing to pay (2025 Design).

It proves once again that consumers don't care (Norwegian Fashion Institute 2011).

Consumers are a large question mark. They don't know whom they can trust, and they don't understand what they should do when so many different discourses about sustainable textile consumption exist (NICE 2011).

The last group of stakeholders we have interviewed is the non-governmental organisations; their perspectives are presented in the next section.

### *The Role of Non-Governmental Organisations*

Few of the earlier mentioned stakeholders in this project mentioned environmental NGOs as important actors pushing for stronger environmental requirements or standards in the textile industry. However, NGO's often play an important part in pushing for regulatory changes. In order for eco-labels to be successful it would thus be very helpful to have the support of both environmental NGO's (ENGO) and other relevant NGO's. In addition to the organisations focusing on sustainable design discussed in section 5.4, we have thus chosen to talk with the following NGOs: GAP (Global Action Plan) Norway, an organisation which directs its focus towards the consumers; Oikos, an organisation focusing on organic production of primarily food but also cotton; and the Ethical Trading Initiative, an organisation working to promote ethical (and environmental) solutions for the industry. GAP Norway is partly funded through the Ministry of Environment, the Ministry for Children, Equality and Social Inclusion and through project funding. Oikos is a member organisation and many projects are funded through external funding. The Ethical Trading Initiative is a member organisation for companies, organisations and public enterprises, and their main focus is ethical trade and working conditions.

### *Limited knowledge and focus*

According to GAP Norway, one of the biggest challenges for improving the environmental standards in the textile industry is the limited knowledge among the consumers:

We experience that consumers don't have the necessary knowledge about textiles and the textile industry. They can maybe think that something has been produced using child labour but it stops there (GAP Norway 2012).

Informing the consumers about environmental consequences of their consumption and about alternative solutions is the main focus of GAP Norway. The organisation has traditionally been working with pollutants, but is also working with ethics, working conditions, animal welfare and GMO. They do encourage Norwegian consumers to buy eco-labelled clothes. Their target group is mainly families with small children, and for this consumer group health is very important. According to GAP Norway and Oikos, textiles have not been a strong prioritised area among NGOs or governmental institutions, but it is becoming more and more important. Oikos has been working on a project with organic cotton farming in Zambia, while GAP Norway has been conducting product testing and information campaigns in Norway.

According to the Ethical Trading Initiative the knowledge about and attention given to environmental standards in the textile industry is lower than the attention given to international working conditions. However, according to the informant from ETI textiles has been on the agenda for a while, and the need for more knowledge about environmental impacts, also within the Ethical Trading Initiative, is substantial.

### *Consumption culture*

According to all organisations a major problem for reaching out to the consumers is the current consumption culture and the fact that T&C is very cheap in Norway. Both Oikos and GAP Norway mentioned the tradition of “buy 3 and pay for 2” as a problematic attitude:

I think very few think that consumption is an environmental problem. When you go to CUBUS and they advertise 2 for 1 and it costs 59 kr. for two t-shirts, you often buy them. It becomes so easy to buy much when it is as cheap as it is today, and that is a problem in the textile industry in general. Not only for the consumption here, but also for people who should get a decent pay throughout the supply chain (Oikos 2011).

This culture of buying is so strong that, according to GAP Norway, it is almost pointless to try to limit the amount of clothing. We do however need to improve the production process:

I don't think you will get people to buy fewer t-shirts. It is better to focus on the how the garment is produced, what we put in and how the raw materials is reused. In a country like Norway, what should the incentive be? It is almost free (GAP Norway 2012).

*Responsible actors and good solutions*

On the basis of this limited knowledge among consumers and the consumption culture described in the previous section, GAP Norway argue that the best way to reduce the environmental impacts of the textile production is to approach the industry and not necessarily to place neither the focus nor the responsibility on the consumers:

It is a big job to increase the consumers' knowledge in Norway, and I think the sales strategy "buy three and pay for two" is so institutionalised that I think it is better to approach businesses than consumers. Of course we need to improve the knowledge and the competence of the consumer, but I think our consumption pattern when it comes to clothing is so extreme that... (GAP Norway 2012).

According to several of our informants the big retailers are paying attention to the market and possible future regulations, and within the textile industry several retailers has been through scandals before and are used to attention from NGOs and consumers on the area of working conditions. None of the NGOs interviewed in this study has themselves placed a strong focus on textiles, but they argue that this is a more important topic now than it has been earlier.

GAP Norway suggested that a more active use of the Environmental Information Act by asking retailers to give information about the contents of the products could be a possible tool in order to enhance the sustainability of the textile retail chain. GAP Norway has recently launched a campaign to limit the use of palm oil in consumption products in which they are actively using the Environmental Information Act as a tool. Using this act as a tool can according to GAP Norway be used in combination with tests of specific products:

If there are logic and strong enough connections in the same way as for palm oil, a solution could be to both place pressure on the industry through use of the Environmental Information Act and to connect consumption to production. That has been done before, and can be done again if the case is strong enough (GAP Norway 2012).

A proposed solution like this implies government regulation through law, like the Environmental Information Act. The informants representing the NGOs all mention that it is much easier for consumers to make the right decisions if labels or other kind of information can guide them. Even though the industry is highlighted as the main actor with the largest and most effective toolbox, governmental restrictions are seen as important:

I don't think that the pressure from the market will get very strong, and that the industry will make changes in the production because of that. It must be based on governmental restrictions and guidelines - that they know that they are coming - that make them turn (GAP Norway 2012).

### *International NGOs*

As mentioned in the introduction the main focus in this report is the Norwegian stakeholders, but when speaking of efforts and campaigns initiated by NGOs we find it necessary to mention international stakeholders as well.

The well-known international NGO Greenpeace challenged in July 2011 the world's largest sports brands to enhance the sustainability of their supply chain by eliminating the use of hazardous chemicals. The Detox campaign was launched after a yearlong investigation uncovered chemicals in clothing items bearing the labels of international brands, which break down in water to form toxic, hormone-disrupting chemicals (Greenpeace 2012). By the end of August 2011, Nike, Adidas and Puma had committed to eliminate all hazardous chemicals across their entire supply-chains and their entire product life-cycle by 2020. In November 2011 these brands launched, together with H&M, C&A and Li-Ning, a "draft roadmap towards zero discharge of hazardous chemicals" (Adidas Group, C&A, H&M, Li Ning, NIKE, Inc., and PUMA 2011).

This effort by Greenpeace and the large sports and clothing brands illustrate that something is happening in the industry, and the focus on sustainability is increasing. In their campaign, Greenpeace emphasises the importance of transparency for the consumers, but eco-labelling is not mentioned as a potential solution.

### *Barriers to the Use of Eco-Labels on Textiles*

#### *Little pressure from the stakeholders*

The eco-labelling bodies have textiles on their agenda. This is the case for the EU flower, the Nordic Swan, and also recently the German Blue Angel. It is also possible to identify labelled products, but difficult to find them in the stores. An important reason for this is probably the lacking pressure from governments, consumers and others relevant stakeholders. The first striking barrier is the lack of pressure from these stakeholders.

NGOs seem to prioritise other products, and some of the environmental organisations are not concerned about labels and consumption at all. The

public authorities have more or less outsourced the eco-labelling strategy and activity to the eco-labelling institutions. The eco-labelling bodies receive political support and some financial contributions, but very few political signals. Compared with the government strategy for food this is surprising. The government has been very active in establishing targets for organic food production in Norway, and promotion of organic labels is one of the central tools in this strategy towards 2020 (Meld. St. 9 2011-2012). Labels also play an important part in the country-of-origin strategy for food and in the marketing of local food products (NytNorge 2012). We have witnessed a substantially higher engagement among political authorities and NGOs regarding the production of food than we see regarding the production of textiles both abroad and in Norway.

As emphasised by the stakeholders one important reason for this is the complexity of the global textile value chain. It is obviously more difficult for the Norwegian authorities to regulate consumption than production of textiles, as the production takes place in places far away from both Norwegian and European jurisdiction.

Previous studies have also shown that there is a disparity between the consumers' perceptions of environmental impact and the actual environmental impact (Chouinard and Brown 1997; Franklin-Associates 1993; Hiller Connell 2011; Laitala and Klepp 2013; Walsh and Brown 1995). This limited understanding of the environmental impacts of textile production may be one of the reasons for the lack of consumer pressure. The governments give priority to other aspects of the textile value chain, such as trade barriers and free trade negotiations. For NGOs other consumption areas has been the focus of attention when discussing sustainability, such as energy use, travel and food.

#### *Lack of good eco-labels*

As identified in the first report from this project (Stø and Laitala 2011) there do exist a large number of relevant labels for the textile sector. This growth of relevant eco-labels should be taken as a good sign as it shows that there is interest in the market, among NGOs and governments, to enhance the sustainability of the textile sector. However, this high number of eco-labels and environmental standards can also represent a barrier for the use of eco-labels. It is our impression from the stakeholder interviews that the consumer knowledge about many of the labels for textiles are low, and it is hard to educate the consumers about all the different labels and standards existing today. This has been investigated in a European consumer survey, and is the main topic of the third report

from this project (Austgulen 2013). The lack of consumer pressure and the “jungle of labels” are used as an argument by the industry for not implementing eco-labels.

The industry representatives argue that none of the existing eco-labels are fully good alternatives as they cover different aspects. In order to get the message through to the consumers the labelling initiatives should thus be better coordinated.

A third major implication regarding the existing eco-labels is the discrepancy between the different stakeholders regarding their preferences of regional or global labels. Global companies like H&M would like to use global or at least regional labels like the EU flower on their products. The foundation for Eco-labelling in Norway will however rather place their focus on smaller regional labels like the Nordic Swan because the consumer awareness of this label is already high. These conflicting solutions to the challenges connected to labelling create another barrier to the success of eco-labels.

A result of this lack of a common standard or a unified broad-reaching eco-label has been that several retail companies have developed their own environmental requirements, environmental standards and labels that vary between the different companies. This will be further discussed in the next section.

#### *Alternative measures/business initiatives*

Despite the limited pressure from other stakeholders, we have shown in this report that the industry is taking measures to increase the sustainability of their supply chains. Even though the industry is sceptical towards the use of eco-labels, being active in the greening of the industry can be a part of their market-maintaining strategy. Retailers are often big and highly visible players, and are therefore good targets for social movement campaigning (Boström and Klintman 2008:146). Internationally the large retailers and brands are already experiencing this pressure from international NGOs like Greenpeace.

Another important motivation for the retailers to enhancing the sustainability of their supply chains is that they identify positive economic values in green niches or in green PR-making at the same time as they see green labelling or greening of their supply chains as a means to reduce the risk of negative publicity (Borstöm and Klintman 2008:146). They have direct links to the consumers and can reach out to consumers with strong political identities, and thus increasing the sustainability of their supply chain may function, as identified in the interviews, as a competitive advantage in the market.

Therefore, most large retailers have departments for Corporate Social Responsibility (CSR) and have already developed and adopted codes of conduct concerning labour standards, environmental impact and human rights. The ambition level of these codes of conduct is however varying and the codes have been used to argue against legally binding standards internationally, and thus have a pre-emptive motive (Jenkins 2001). The lack of consumer pressure and stakeholder pressure in general may as well be a reason for the retailers to undertake measures now, *before* the consumer knowledge and pressure becomes prevalent. By setting their own environmental requirements (with little pressure from labelling organisations) the retailers may limit the future need for, and thus pressure for government regulations or regulation by a third party like eco-labels.

As shown in this report, there do exist a number of industry initiatives as well as initiatives taken by international NGOs that do not include eco-labels as a part of the solution. This barrier, combined with the other barriers, especially the fact that not one or a few labels that are viewed as good or sufficient by all stakeholders exists, makes it even more challenging for eco-labels to break through and to be established as a good solution.

#### *Different perceptions of responsibility*

Who has the responsibility to reduce the environmental impact of the textile production and consumption? This question of responsibility becomes a real barrier because there is no simple answer to the question. Since effective labelling regimes for textiles are lacking, the responsibility cannot be placed on the consumers. For some of our informants this represents a problem, for others the consumers only have a small part to play in this game. The lack of consumer involvement is by many stakeholders recognised as a challenge because consumer knowledge and engagement is necessary in order to push for better solutions for the environment.

In this report we have also shown that the government representatives are concerned about the environmental challenges in the textile industry, but that they think they have few available tools to use in order to improve the situation. The main initiatives taken by the government is the regulation of use of chemicals through the Environmental Protection Agency and funding of the Nordic Eco-label and environmental organisations through the Ministry of Children, Equality and Integration and the Ministry of Environment. The pressure from environmental organisations has also, until now, been limited. Few Norwegian environmental organisations has focused on the textile industry in particular, but international organisations

like Greenpeace has started a broad campaign, aiming at especially the use of chemicals in the textile production, which is also affecting the Norwegian stakeholders as well.

This pressure from international organisations might have affected the retailers operating in Norway. The actors that were most often pointed out as the responsible actor in the stakeholder interviews were, not surprisingly, the retailers and the textile industry itself. A finding from our analysis is that these actors are taking some of the responsibility by trying to improve the sustainability of their supply chain. When we conclude that all actors in the value chain have to prepare themselves for changes in the environmental standards for textiles, it is this activity from the retailers we are thinking about. As long as the retailers' enthusiasm for eco-labels are limited and the pressure for using eco-labels are limited from the other relevant stakeholders this strategy have its limitations.

However, studies of consumers' trust in environmental information (Stø and Strandbakken 2005) have shown that consumers don't trust the green washing from the industry and retailers. This is probably also the case for the textile retailers. It is also not clear what kind of eco-standards the businesses will end up with. Will they be sufficient to meet the challenges?

In the eco-labelling success stories, for household chemicals and paper products in Norway (Rubik and Scholl 2002) we have witnessed cooperation between NGOs, the relevant industry, retailers and public authorities in the development of environmental criteria. A major challenge for the textile industry thus seems to be the lack of cooperation between the stakeholders to the industry.

#### *Windows of opportunity: baby products and green procurement*

We have now identified several barriers to the success of eco-labels in the textile industry, and we thus find it necessary to mention some of the opportunities as well. The picture is not all black, and as mentioned in the interview with the Foundation for Eco-labelling, the industry has always been sceptical to the introduction of eco-labels, and the same arguments has been used when introducing eco-labels for hotels and for the paper industry.

In this report, we have identified two areas where there seems to be a market for eco-labelled textiles. The first is, as mentioned by all informants, textiles for babies and small children. There seems to be a willingness to pay among parents with small children, and this market has the potential to be a door opener for eco-labels for T&C. The second is green public

procurement. Public authorities are major consumers in Europe and can thus make an important contribution towards the potential future success of eco-labels. As highlighted by the informants representing the government representatives, the (Norwegian) government cannot prohibit anyone from importing certain types of products, but the government can direct the import in a more sustainable direction by implementing a (strong) green procurement policy. As recognised by Stø et al. (2005:21), a degree of green public procurement often seems to be necessary to give eco-labelled products enough volume to survive in the market.

## **Conclusion**

This report is based upon stakeholder interviews in Norway, with Norwegian and Nordic stakeholders. The interviews were mainly carried out in 2011. This is the second SIFO-report from the SESTI project. The first report is a literature review and a state-of-art overview of eco-labels and environmental standards in the textile value chain (Stø and Laitala 2011). The third report is based upon a consumer survey on attitudes, knowledge, practices and values in Norway, Sweden, Germany, France, and England. The survey was conducted in 2012 (Austgulen 2013).

Thus, the final conclusion from the project will be based upon this triangulation. This report is a description and analysis of the voices of vital stakeholders along the textile value chain. It is important to keep in mind that these stakeholders may give strategic answer to the questions asked in the interview guide. They all have interest to defend and to promote. In that light it is not a surprise that the design community prefer holistic sustainable fashion; that the eco-labelling institution advocates the importance of independent third party certification and that the industry and retailers are sceptical towards regulations from political authorities. The challenge for the analysis, as we have tried to do in the discussion of barriers in chapter 6, is to look beyond the obvious interest of the stakeholders. However, these stakeholder interests, as they are presented by themselves, are decisive for the future of eco-labels for textiles.

The main objectives of this report have been to answer the following questions:

- a. If anything, what has been done by the various stakeholders to increase the sustainability of the textile supply chain?
- b. Who are perceived as the responsible actors?
- c. What is perceived as good solutions to the problem?

### *Sustainability along the textile value chain*

Our main conclusion is that there is an increasing understanding of the environmental impact of the textile production among all stakeholders. Compared with food, wood and paper, household chemicals, painting, household appliances, energy production and use, tourist resorts and to some degree also fisheries, the environmental understanding of the negative impact of textile production has been limited. Not necessary among primary producers and people in the neighbourhood of farms and factories, but among other stakeholders and among consumers and citizens. The findings from the interviews do however indicate that the awareness is changing among stakeholders, and they are indicating that textiles will be a hot topic in the environmental and ethical discourse in the near future.

The picture is gradually shifting and a special focus has been placed on the production of cotton. There is an increasing understanding among experts that the current situation must change, this is strongly emphasised by the sustainable design community. This need to challenge the sustainability of the textile production is also recognised by the retailers themselves. Within programmes of Corporate Social Responsibility both large and small companies are placing this question on their agenda. Our perception of the retailers is that they are preparing themselves for changes in the near future. This change may come from the top: regional and national governments, or through pressure from the bottom: consumers, citizens and NGOs. However, this increased awareness has not yet been manifested into much action when it comes to the use of eco-labels on textiles.

### *Who are perceived as the responsible actors?*

There is a paradox in this report. In the interviews we have discussed the role of consumers as market actors, but the consumers' voices are not found and articulated in the political discourse and only identified in the market for baby-clothes. The consumer role and the consumers' voices is the main focus in the third project report (Austgulen 2013). Here we must limit ourselves to the other stakeholder groups' perceptions of the consumers. Our conclusion is that the perceptions of the potential role of consumers vary substantially between stakeholder groups. Consumers may have a part to play, but in the current situation consumers have few choices and their potential as market actors are limited. During the last years we have witnessed an increased activity from the retailers and major brands. There may be various rationales behind this activity. One is to prevent regulations imposed by national and regional authorities. Another

rationale is the competition between the large market actors. They want to prepare themselves for a change in consumer practices, and this has stimulated the competition in the market for more environmentally sustainable products.

There is a common understanding that governments have a part to play in this sector, as they have had in other strategic sectors. However, the global textile actors have one advantage: it is difficult to regulate economic activities along a complex global value chain and there might be a common understanding to settle for voluntary agreements.

### *Good solutions to the problem?*

The various actors don't agree about potential solutions, and their positions reflect their own interest. There are strong arguments for international and global standards. However, it takes time to develop such standards and also to promote it as an internationally recognised label or standard. National and regional labels are trusted and well-known by consumers, but are opposed by other stakeholders like global retailers who prefer global labels.

There are reasons to believe that the initiatives taken by the large global textile retailers will improve the environmental sustainability of the textile sector. Whether these initiatives from the retailers will be sufficient to meet the environmental challenges of the textile sector alone is another question. Previous studies have shown that the retailers are also facing a lack of trust in labels developed by the industry and retailers without a third-party certification scheme. However, this distrust is stronger in Norway than in other countries (Stø and Strandbakken 2005).

The problems with finding good solutions within the textile sector could be that the voluntary tools emphasised within the new governance perspective does not function when there is an uneven distribution of resources among the stakeholders in the process. Olsen (2002) argues that voluntary processes may not always produce precise and stable policy outcomes. One of the reasons for this instability is the fact that not all stakeholders have resources to play the part expected of them in the political process. In addition, this is a global process, and it is difficult for NGOs to match the multi-national companies; both regarding economic resources and competence. This uneven distribution of resources and influence may strengthen the demand for more traditional regulations of crucial parts of the textile value chain in the future.

*Limitations and future research*

This report is based upon interviews with 22 stakeholders in Norway. Even though some of them are representing international labelling institutions and others have links to the global textile market, this represents a limitation to the study. This report is focussing on the stakeholders' own perceptions of the sustainability challenges in the textile industry, their own role and responsibility, and the role and responsibility of other actors. All stakeholders have interests in the topic studied and it is therefore reasonable to expect that they can have emphasised their own role in the interviews. The validity of their statements is to a certain degree secured by cross-checking the information with other informants and sources. However, the validity would be further strengthened if the statements, especially the ones about available tools and existing initiatives were to be checked more thoroughly. It would also be interesting to get an overview of the eco-labelled garments that are available for purchase in order to evaluate the effects of the efforts that are being taken. The role of the consumers' and their awareness of various eco-labels used on textiles is the topic of the third report to this project (Austgulen 2013).

When interpreting the findings we must also take in account that the awareness about the environmental challenges in the textile supply chain may have changed during the project period. We have witnessed that Greenpeace has been very active in Asia during the last years, and that the working conditions within the textile industry has been on the front page of many newspapers. Recently the Norwegian minister responsible for consumer affairs invited all relevant stakeholders to a dialogue on these matters. All these factors support our main conclusion that all stakeholders, nationally and globally, have to prepare themselves for changes in the near future.

## C. Consumer Survey

### Introduction

#### *Studying the Role of Consumers*

Sustainability issues in the textile sector is now being given increased attention from scholars from many disciplines, from the fashion industry and from the textile industry itself (Gallastegui 2002; Laitala and Klepp [in press]; Lee et al 2012; Meyer 2001; Siegle 2011). One of the most popular solutions proposed is the use of eco-labels on textiles. Eco-labelling is a market-based and consumer oriented approach to deal with environmental issues (Boström and Klintman 2008:28) which presupposes a relatively rational actor, able to seek and process information and willing to act upon that information (Stø et al 2005:22).

The amount eco-labels created or adapted to the textile market has been growing since the early 1980. The relevant labels have been reviewed earlier in this project in a literature review covering the different types of labels and the labels relevant for the textile industry in Europe today (Stø and Laitala 2011). Despite the growing amount of labelling schemes the use of eco-labels on textiles is not yet very extensive.

A previous report in this project analyses the roles, attitudes and experiences of different stakeholders in the textile industry concerning the use of eco-labels (Austgulen and Stø 2013). In that report, consumers were treated as a stakeholder group, but the information presented about the consumers was second-hand information from the other stakeholders that were interviewed. However, consumers are among the most important stakeholders in the context of labelling schemes, as labelling programmes first of all seek to encourage a move towards more environmentally friendly consumption patterns (Gallastegui 2002:316), and will thus be the main focus of this report.

The consumers are ascribed roles as acting and morally responsible persons who, through their choices in the market can make a difference and can solve social and environmental problems. According to Siegle (2011:xi) the textile industry's enemy is "the intelligent fashion consumer who asks the right questions and buys more carefully". An important question is thus if European consumers are ready to take on this responsibility. This question constitutes the background for this report, of which the main purpose is to present and evaluate consumer attitudes to eco-labels on textiles attained through representative surveys in five European countries.

This report presents an overview of the variations in attitudes towards and knowledge about eco-labels for textiles among selected Western

European consumers. A rather straightforward description of the national response patterns for the relevant questions is presented, based mainly on frequency distributions. I also attempt to find some common patterns across the five countries, as well as distinct national and regional features. Based on the data presented a discussion about the future consumer demand for eco-labelled textiles.

### *Structure of the Report*

The report situates the question of eco-labelling within a theoretical and historical context, and presents the research questions. The method used and the selection of data are described and presents the findings regarding the respondent's associations to the relevant labels for textiles. A pattern identifying so called political consumers of textiles is presented and a "political consumer index" is constructed. The respondents reporting on whether they consider environmental concerns when purchasing textiles are presented, and their willingness to pay and considerations of availability are thereafter presented. The results of a regression analysis, where the political consumer index are used as the dependent variable, are provided. Research questions are discussed based on the data presented in the previous chapters and finally some conclusions are drawn and suggestions for future research are presented.

## **Background and Research Questions**

### *Political Consumerism*

In line with the shift from "old governance" to "new governance" since the late 1980s, there has been an increasing focus on the responsibility of the consumer, and the term "political consumption" has become well known. Traditionally politics and consumption has been considered as two very different activities. Consumption has, in the liberal society, always been connected to the private sphere. The consumer uses their own private funds in order to maximise their own benefits. Politics on the other hand has been connected to the public sphere. Opposed to consumption, where the actions are directed to increase self-interest, politics is directed towards the general interest (Sørensen 2004:34).

Traditionally, environmental policy makers has relied heavily on "command-and control" environmental regulations, which stipulate mandatory products or process standards (Jordan et al 2004:162), separating politics from consumption. The "new" environmental policy instruments (NEPIs), namely eco-labels, voluntary agreements, eco-taxes

and tradable permits, has however grown significantly in Europe the recent years (Jordan et al 2004:162). Eco-labels are claimed to be market-based, cost-effective<sup>7</sup>, flexible and consumer-driven instruments which includes the consumer and consumption patterns in the solution to environmental problems.

The structure of the textile industry, with a large share of the production in developing countries combined with international trade regulations, makes it difficult for single nations to regulate the production process or import of textiles across national borders, and the governments are thus more dependent on softer mechanisms like the new environmental policy instruments (NEPIs) (Austgulen and Stø 2013).

By making the consumer socially responsible, he or she cannot simply pursue rational self-interest goals in his market transactions. According to Micheletti (et al 2004:xiv) “the ideal-type Egoistic Economic Man must be modified to an ideal-type Responsibility Taking Political Consumer, who applies values other than purely self-interested ones in consumer choice situations”. Micheletti (et al 2004: xiv) defines political consumerism as “consumer choice of producers and products with the goal of changing objectionable institutional or market practices”. It is hard to identify the respondents’ motivation and goals based on a consumer survey. In this report the goal is rather to seek to answer if European consumers are of the view that they have a responsibility for solving the environmental challenges in the textile industry, and if they have the necessary knowledge to take that responsibility.

### *Environmental Challenges and Consumption*

As indicated in the introduction, and in the initial literature review (Stø and Laitala 2011), a growing amount of eco-labels are dealing with textiles. Some labels, like the Global Organic Textile Standard (GOTS) deals with textiles exclusively, while other eco-labels like the EU-flower, the Nordic Swan and the German Blue Angel have integrated requirements for textiles in their existing labelling schemes.

In relation to the issue of environmental challenges in the textile supply chain, people are not only buyers of textiles. They are also citizens and users of textile products. These varying roles imply different considerations and capacities, and they refer to different contexts. As customers, people relate to retailers of various kinds and to the textile industry. Sustainability issues in the textile industry are then transformed

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7. As an environmental policy instrument for the government, not necessarily for the producers and retailers.

into an issue or an aspect that may or may not be considered when buying textiles. As citizens, people will refer to political and governmental institutions, to the media and to various forms of social mobilisation. As a social and political issue, environmental challenges will be an issue that can be regulated and influenced in many ways (Kjærnes et al 2007:4).

Another important aspect of textiles is the social aspect as it constitutes a big part of people's daily life. The environmental aspects of a particular garment might be far less important than other aspects like design, colour, fabric etc. For others, health aspects might be very important and thus a reason for them to buy eco-friendly textiles.

Consumption of textiles may be subject to serious reflection, but very often consumption of clothing is elements of our everyday life, characterised by strongly routinised practices. Consideration of environmental challenges connected to the production of textiles may or may not be included in these practices, as a conscious reflection or as a matter of routine. Buying few clothes and textiles, can be a part of a normalised practice and not necessarily a result of environmental considerations. It is also important to remember that consumption do not only include the specific *purchase* of a particular product. People might consider the environment when deciding how to wash and maintain the products and when they decide to use inherited textiles instead of buying new ones.

According to Døving and Klepp (2009:113) consumption of clothing includes "how much clothes we obtain, how we put garments together to outfits, the relations between the outfits and the social situations we use them in, how we buy, store, care for, wash and dispose clothing."<sup>8</sup> To consider the environment when buying new textiles is thus only one of several possible ways to let environmental considerations guide ones consumption practices.<sup>9</sup> It is however this aspect that is focussed on in this report, but it is clear that it is important to bear in mind that the consumption of textiles is not limited to the purchase of clothing.

Similar to other issues, like animal welfare, there are several other reasons for why environmental considerations can be kept out of the purchase practices. Buying particular environmental friendly products rather than conventional ones presumes a market that differentiates on these aspects. Another alternative is that environmental challenges are regulated through other means like legislation. People may also consider

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8. My own translation from Norwegian.

9. Research suggests that for some apparel products, dry cleaning and home laundry may result in more environmental harm than any other life cycle stage (Allwood et al 2006; Chouinard and Brown 1997; Franklin-Associates 1993)

their role as citizens in other arenas than the market as more important in order to affect the production process etc. (Kjærnes et al 2007:4).

However, the concept of the political consumer embraces the opposite situation, where people do use their purchases to express citizen concerns. The empowered consumer is the basis for the use of eco-labels, where the idea is that the consumer shall take (some of) the responsibility to enhance the sustainability of the production by buying eco-labelled products. In this way, eco-labels can be an important source of innovation in the production of T&C as one of the objectives is “to encourage producers, governments and other agents to increase the environmental standards of products/services” (Gallastegui 2002:317).

To start with, it is necessary to clarify the understanding of eco-labelling in this context. As initially stated, eco-labelling is a market-based and consumer oriented approach to dealing with environmental issues (Boström and Klintman 2008:28; Jordan et al 2007:162). Eco-labelling is here further defined as *consumer oriented labels and labelling schemes used on products or on packaging in the form of symbols/pictures which are supposed to tell something about the environmental effects of the product and/or the production process.*<sup>10</sup>

The main focus is given to the use of so called collective labels, labels that are owned by more or less independent organisations and can be used by several producers if they pay a fee and satisfy the requirements. Focus will not be given to mandatory labelling or administrative labelling. We do however not know how the consumers understand and define the concept of labelling; do they distinguish between collective labels and brands? The consumers’ perception of eco-labels is not necessarily the same as ours, and it cannot be taken for granted that they know how we define it. This is important to consider when studying consumer views and consumption practices.

### *Research Questions*

The overarching objective of this report is to discuss the future demand for eco-labelled textile products from (Western) Europe. In order to do this there is a need to investigate the existing consumer knowledge of eco-labels and of the environmental challenges facing the textile sector, as well as who the consumers’ consider as the responsible actors.

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10. This definition builds on the definition of labelling by Heidenstrøm, Jacobsen and Borgen (2011).

This leads to three main research questions which constitute the point of departure for this report:

1. How do the consumers consider the relevant labelling schemes for textiles?
2. What are the consumers' attitudes towards and practices regarding eco-labelling of textiles?
3. Who do the consumers' consider to be the responsible actors?

When seeking to answer these questions it is also interesting to investigate whether there are significant differences between the different nationalities participating in the survey. By answering and discussing these questions, a discussion about the future demand of eco-labelled products from Europe is initiated.

## Methods

### *Data and Sampling*

The survey includes data from five European countries: France (FR), England (EN), Norway (NO), Sweden (SE) and Germany (GE). The data were collected through TNS' web panels (CAWI)<sup>11</sup> in the respective countries. In Sweden the respondents are drawn from two panels. The panels consist of a pre-recruited selection of respondents who are willing to participate in surveys and who have access to computers with internet. In Norway the participants in the panel are randomly selected.

The size of the panels indicates that it is possible to draw representative samples. In Norway the sample is randomly selected, in the other countries quota sampling is used. The respondents' background characteristics are already known, and are used to target the survey to a representative selection of the population. The panel samples are pre-stratified by age, gender and residence, and the respondents are randomly selected within these groups. The sample includes approximately 1000 respondents from each country.<sup>12</sup> The final selections are weighed according to age and gender in each country.

The data were collected in the period from March 14-21, 2012. To my knowledge no big environmental scandals in the textile industry, which might have influenced the answers, were high on the agenda in this period in any of the participating countries.

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11. Computer-Assisted web Interviews.

12. The exact sample sizes are the following: France: 1023, Germany: 1041, Sweden: 1084, England: 1029, Norway: 1000.

### *The Questionnaire*

The questionnaire was developed through a thorough process of communication within the Norwegian research team and between the research teams in Norway and in India. Researchers with connection to all the countries studied were consulted throughout the process. Prior to running the survey, the questionnaire was piloted in Norway, and adjustments were made in line with the feedback. After piloting, the questionnaire was translated to the respective languages, both by researchers with connection to the respective countries and by official translators at TNS Gallup. The translations were finally cross-checked by TNS Gallup employees in the respective countries. The questionnaire was constructed to meet the challenge that it is presented to people with different cultural and institutional questions, but it is still important to be aware of this challenge when interpreting the data. We cannot preclude the possibility that some questions are interpreted differently across different national and cultural settings (Kjærnes et al 2007:9). Questions about the environment might for some represent a “good cause”, which must be taken into consideration when interpreting the results.

### *Challenges Connected to Consumer Surveys*

As the research questions demonstrate, we seek to explore attitudes towards and perceptions of eco-labels on textiles among selected European consumers. Since we are dealing with five countries with varying cultural characteristics, market structures, public discourses and consumption habits, validity problems are particularly challenging. The questionnaire should in principle be identical in all five countries. We are, however, fully aware of the fact that the questionnaire is presented to people with different cultural intent and where the words may have diverse connotations. The possibility that some questions and words are interpreted differently across the national and cultural settings can thus not be precluded.

The quantitative consumer survey is a good tool when investigating attitudes, but is not necessarily sufficient for studying consumer practices. When the results regarding consumer practices in this survey is interpreted very strong conclusions will not be drawn. When interpreting and analysing the results it is also important to take into consideration that environment represents, for many, a ‘good cause’ which may push the respondents towards giving the ‘correct’ answers rather than expressing personal doubts or ‘the wrong’ habits.

Another important challenge we met when designing this particular survey was to design a survey intended to study the consumer awareness of something that is not very available at the market. In this report, one of the main goals is to study the consumers' awareness of eco-labels that are used on textiles. However, a problem when doing this is that very few products with the particular labels are available at the market; this is also reflected in the findings presented later in the report. The implications of this is that we measure the consumer awareness of the labels in general, because it has been used on other product categories, and/or that we measure the respondents ability to resonate on the meaning of the labels based on the information revealed by the design of the label.

The consumer's considerations when purchasing textiles are also studied. As long as few eco-labelled, and for that matter quality labelled, products are available at the market it is very hard for the consumers to take these (at least qualified) into consideration when buying textiles. When a consumer claim to think of the environment it is thus hard to interpret what the consumer is doing when he/she considers the environment.

According to Hustvedt and Dickson (2009) consumers that consider buying clothing with an organic content are more aware of the environmental effects of clothing than other consumers. According to Hiller Connell (2011) one of the so-called eco-conscious apparel acquisition behaviours present among consumers are acquiring apparel with perceived environmentally preferable attributes, and according to both Hiller Connell (2011) and Laitala and Klepp (2013) many consumers assume that natural fibres are environmentally preferable to man-made fibres. This behaviour of favouring natural fibres over manufactures fibres is an illustrating example of the disparity that can exist between the consumers' perceptions of environmental impact and the actual environmental impact.

Empirical evidence indicates that most natural fibres have as much of an environmental impact as manufactured fibres (Chouinard and Brown 1997; Franklin-Associates 1993; Walsh and Brown 1995). The respondents that are answering that they are thinking of the environment when they purchase textile may thus not necessarily buy products that are less harmful to the environment. However, the objective of this study is not to investigate the validity of the respondents awareness of environmental impacts but rather to investigate whether environmental concerns are important or not for consumers when purchasing (or a reason for not purchasing) textiles.

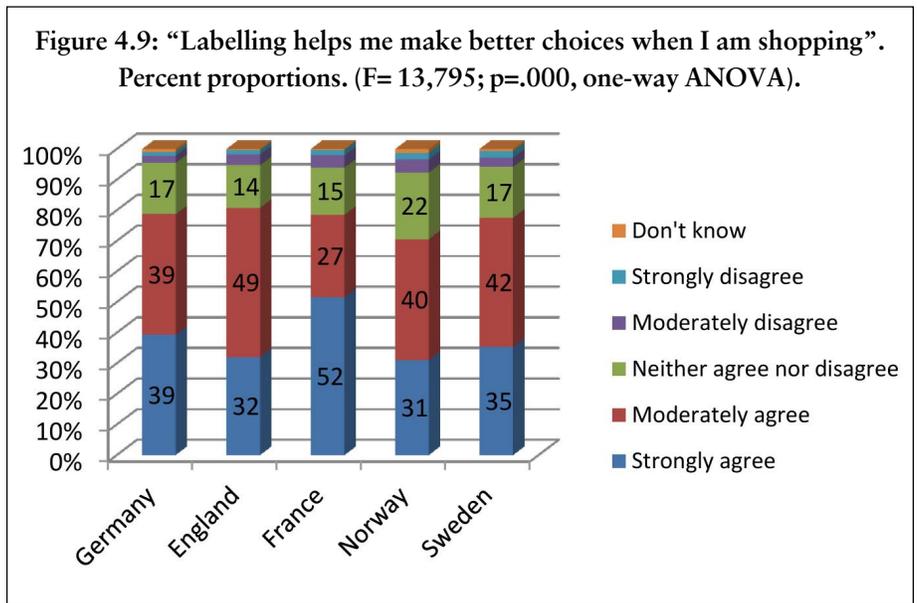
Based on the same reasoning as above, this might as well be hard to do in a valid way. Because of the generally low knowledge among consumers regarding environmental impacts, respondents might feel that it is hard to actually consider the environment when buying textiles because few guidelines regarding environmental impact are available (Fisher et al. 2008). It is thus important to consider that many of the questions in this survey can be perceived as quite abstract for the respondents, and that this might weaken the validity of the results.

### Knowledge about and Attitudes towards Eco-Labels

#### General Attitudes towards Labels

In order to understand the consumers’ attitudes towards (eco-)labelling of textiles, it is necessary to examine the respondents’ attitudes to labelling of products in general. In order to get an impression of whether the respondents have an active approach to product labelling we asked the respondents to consider the general statement “labelling helps me make better choices when I am shopping”.

Figure 4.9 illustrates that a large share of the respondents in all countries answered that they strongly or moderately agreed with the statement. Based on the number of respondents who answered that they strongly agreed with the statement, the French respondents are the most positive to the use of eco-labels, while the Norwegian and English respondents are the least positive. The variation between the countries is statistically

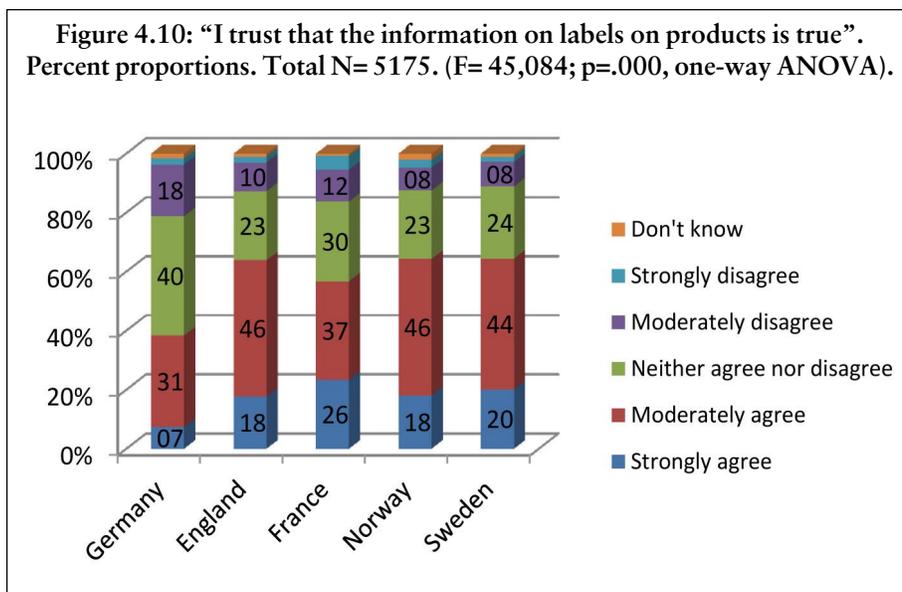


significant (one-way ANOVA,  $F=13,795$ ;  $p=.000$ ). Women in all countries do significantly more frequently agree with the statement than men (independent samples t-test,  $t(4487)=7,290$ ). This may indicate that there is a gender dimension in the respondents' attitudes towards labels in general.

We know that women do most of the household purchases in Norway, especially when it comes to groceries (Leira and Ellingseter in Heidenstrøm et al 2011:91), and they may thus have a more reflective relationship to purchases. This is also the case for clothing, as women spend a larger amount of their income on clothes (Laitala et al 2009). By comparison, a Eurobarometer survey from 2009 on Europeans' attitudes towards the issue of sustainable consumption and production show that almost half (47 percent) of the respondents (EU citizens) said that eco-labelling plays an important role in their purchasing decisions, and that eco-labelling plays a more important role in the women's purchasing decisions of women, the over 38 years-old, those with the highest level of education and the self-employed (Eurobarometer 2009:18, 20).

Another way of studying the respondents' general attitudes to labelling is to connect it to a question of trust. Labelling is in itself an attempt to create trust among the consumers, and labelling schemes are used to document certain characteristics of the product and to certify this documentation. There are reasons to believe that people will have greater confidence in certain labels than others, so general questions like the ones presented in this section must therefore be interpreted as a more general attitude to labels as a communicative tool. We asked the respondents to consider the statement "I trust that the information on labels on products is true".

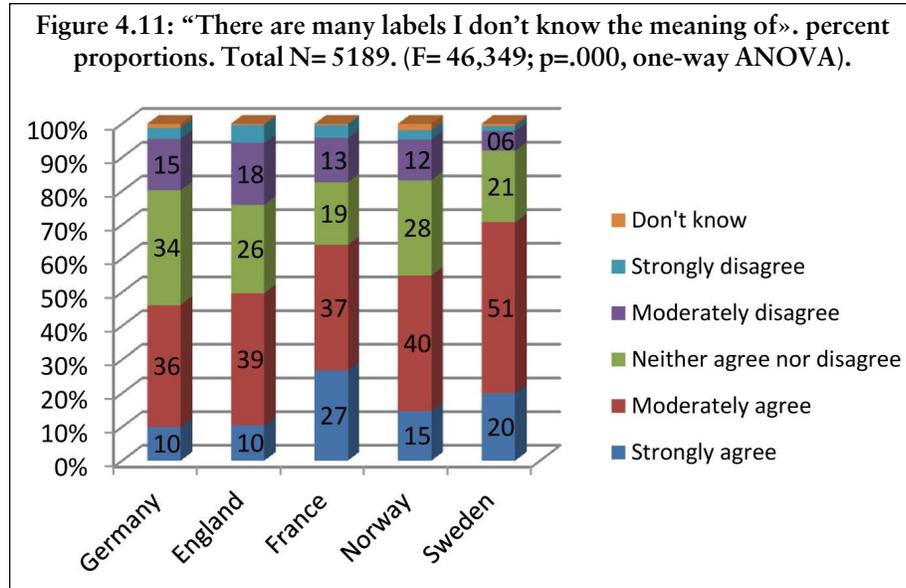
A significant share of the respondents in all countries answered that they either strongly or moderately agreed with the statement, ranging from 37 percent in Germany to 64 percent in Sweden. Few respondents (ranging from 11 percent in Sweden to almost 20 percent in Germany) disagreed with the statement. However, quite a few of the respondents answered that they neither agreed nor disagreed. The response pattern is illustrated in Figure 4.10. Similar to the previous statement, women in all countries does significantly more often agree with the statement than men (independent samples t-test,  $t(4615)=7,476$ ). The lower trust among men might be one of the factors explaining that they do not use labels as actively as a guide for their purchases as women.



A third and a very important indicator of consumer knowledge about and attitudes towards labels is whether there are many labels they do not know the meaning of. This is often referred to as “a jungle of labels” which it can be hard for the consumers to manoeuvre in. As mentioned, labels have become a popular way of informing the consumer and to make him/her responsible for both social and political issues, but the whole purpose with the single label is lost if the consumers do not know it or do not understand the meaning of it. We therefore asked the respondents to consider the statement “There are many labels I don’t know the meaning of”.

Figure 4.11 illustrates that a large share of the respondents answer that they agree with the statement. The most confused consumers can be found in Sweden and France, and the least confused can be found in Germany. The national differences are statistically significant (one-way ANOVA, F= 46,349; p=.000). There are no significant gender differences regarding general awareness of labels.

Overall, these statements reflecting the general attitudes towards labels indicate that a large majority of the respondents use labels as a guide for their purchasing decisions. A majority of the respondents in all countries except for Germany also report that they trust the information on the labels, but a substantial share of the respondents expresses uncertainty when asked to consider the trust statement. A majority of the respondents also expresses confusion over the existing labels as there are many labels



that they do not know the meaning of. The combination of confusion created by “a jungle of labels” and a weak mistrust to the information on the labels might weaken the meaning and effect of the labels in general. It is however important to emphasise that the above mentioned statements are quite general, which can make it challenging for the respondents to interpret them correctly. In the next section the consumer awareness of some of the largest eco-labels in general and for textiles in particular on the European market are examined.

### *Labelling Profiles and Consumer Knowledge*

In order to identify the consumers’ knowledge about and awareness of the various eco-labels used on textiles we asked the respondents what they associated with the different labels and if they had seen the respective label on T&C. The respondents were given 11 different options, e.g. “fair trade”, “environment”, and were asked to choose up to two alternatives or to tick the box for “don’t know” if they didn’t know the label. The respondents in each country were given the opportunity to tick off for “Norwegian” if the respondents were Norwegian, “German” if the respondents were German etc. This is reflected as “National” in the illustrations below. To prevent that the order of the questions affected the responses, the labels and answer categories were rotated randomly.

One of the options the respondents were given were “ecology” in English. If a product are ecologically produced the farming often use

principles like prudent use of natural resources, such as soil, water and livestock; respect for biological cycles and controls; long-term economic viability of farm operations as well as enhancements of life for farmers and the society as a whole (Gustafson 2011). This term is thus not the same as *organic*, even though they are often confused. The meaning of the word *ecologic* also varies between the countries, as the word “*økologisk*” in Norwegian shares the meaning of the word *organic*. It is thus important, when interpreting the results from this survey, that the respondents have been introduced to the following words in the respective languages: *økologi* (Norwegian), *ecology* (English), *ekologi* (Swedish), *Écologie* (French), and *Ökologie* (German). The meaning of these words does however vary in the different languages, and they are often confused with the meaning of the word *organic*.

Overall, ten different labels were presented to the respondents. Five of the labels are global or regional and were presented to all respondents. The global and regional labels presented are the following: the EU Flower, the Global Organic Textile Standard (GOTS), Fairtrade, Oeko-Tex Standard 100 and Woolmark. National eco-labels were also presented to the respondents from the respective country. The national labels included are the following: the Nordic Swan, the German Blue Angel, the Swedish Falcon, NF Environment and the Soil Association. By including labels like Woolmark and Fairtrade, we control for bias connected to the theme of the survey, which are eco-labels.

Overall, the survey mainly contains questions and statements regarding eco-labels. By including other labels as well we control for the typical “yes-saying” effect which can appear. If this effect would have been present, a large proportion of the respondents would have associated i.e. the Woolmark and the Fairtrade label with environment as well.

The (environmental) criteria for the different labels will not be the focus of this report. A broader presentation of the criteria requirements can be found in the literature review of this project (Stø and Laitala 2011) and on the labelling organisations’ own websites.

### *Regional and global labels*

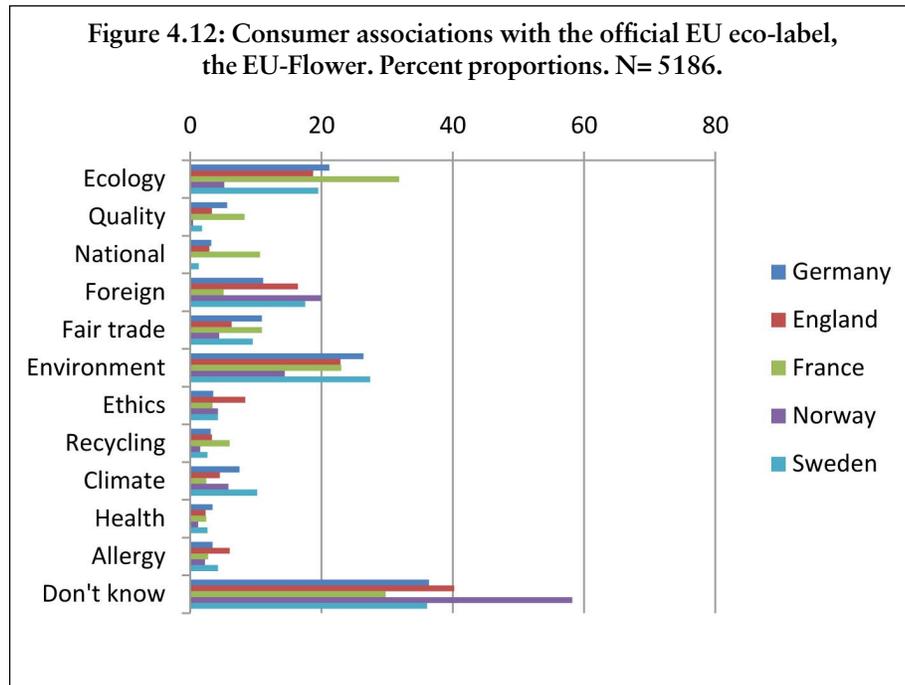
The regional and global labels included in this survey are the official European eco-label, the EU Flower; the Global Organic Textile Standard (GOTS); Fairtrade; the Oeko-Tex Standard 100 and Woolmark.



The EU flower

The EU Flower is the official European eco-label. It was established by the EU commission in 1992 and is a part of the EEC-agreement. To qualify for the eco-label, the products have to comply with a set of criteria. These environmental criteria take the whole product life cycle into account, from the extraction of the raw materials, to production, packaging and transport, use and recycling. The requirements are sharpened continuously (European Commission 2012a). In the beginning of 2012 the EU Eco-label had been awarded to the largest number of products (all product groups) in Italy, France and the UK. Italy had issued more than 50 percent of the total number of Eco-label awards, while France and UK totals were 22 percent and 9 percent respectively (European Commission 2012b). The EU-Flower can be found on 26 different product categories (European Commission 2012c).

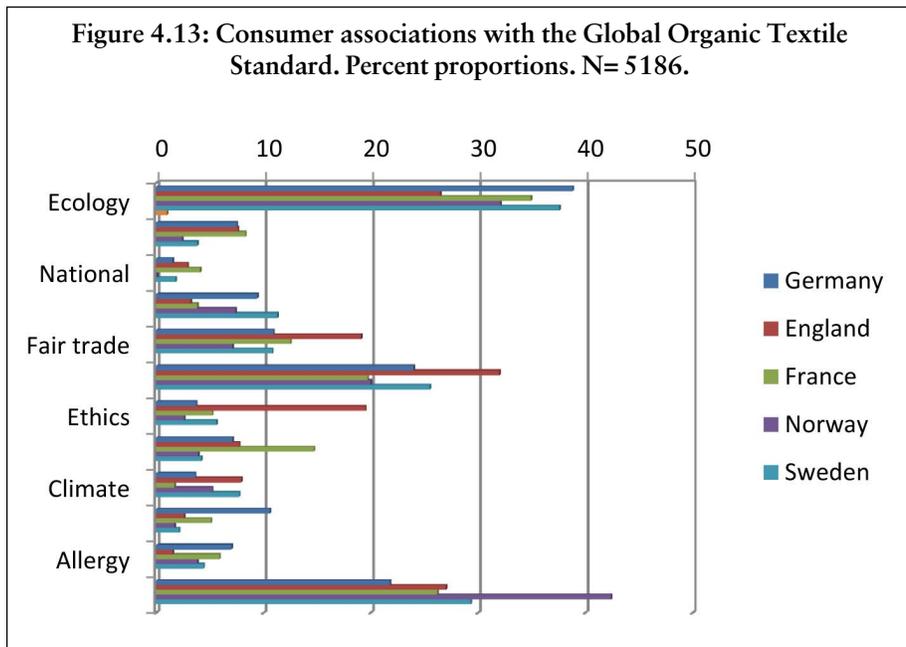
The proportion of the respondents who state that they don't know the label is highest in Norway with 59 percent and lowest in France with approximately 30 percent of the respondents. A moderate share of the respondents associates the label with environment, ranging from 14 percent in Norway to 27 percent in Sweden. On the other hand, almost the same amount of respondents associates the label with ecology. Ecology/organic is however not a part of the EU-Flower criteria. The knowledge about the official EU eco-label is thus not very high. The Norwegian



respondents are least aware of the label, which might be explained by the fact that Norway is the only country surveyed which is not a part of the EU. When asked if they had seen the label on T&C, only 2.5 percent of the Norwegian respondents state that they had seen it, while the comparable number is 19 percent in France. These numbers reflect that the number of products with the EU-flower is limited, especially for textiles.



The Global Organic Textile Standard (GOTS) is a relatively new worldwide processing standard for textiles made from organic fibres that was introduced in 2006. According to GOTS themselves, the label “defines high level environmental criteria along the entire supply chain of organic textiles and requires compliance with social criteria as well” (GOTS 2012a). Only textile products that contain a minimum of 70 percent organic fibres can become certified, and all chemical inputs must meet certain environmental and toxicological criteria (GOTS 2012a). In 2011, 14 certification bodies were entitled to work as GOTS-certified approvers (GOTS 2011).



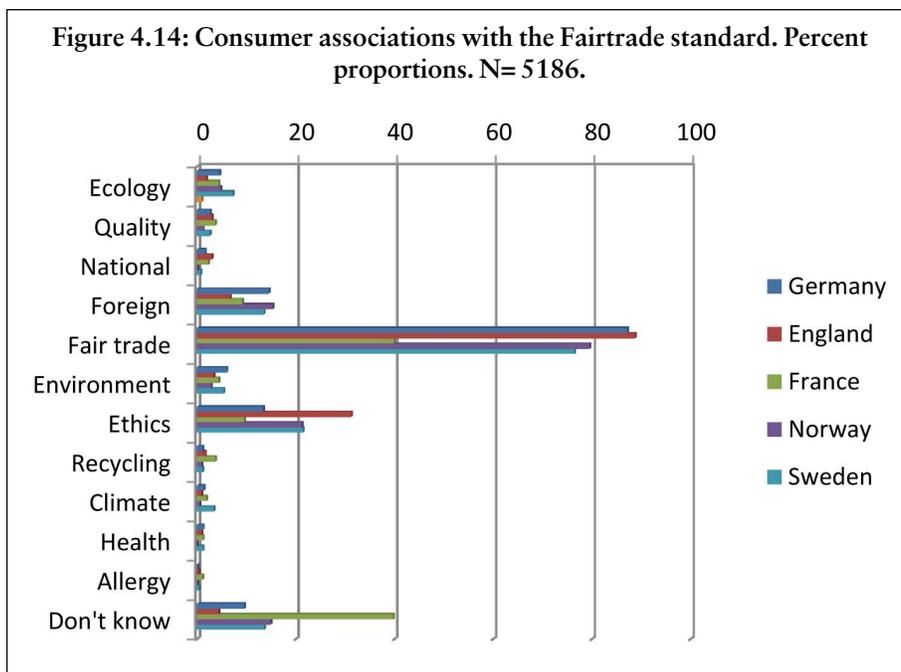
As illustrated in Figure 4.13 the consumers' perceptions of the GOTS-label are varying. A large share of the respondents associates the label with ecology. This is however not surprising since the logo that was presented to the respondents includes the word "organic". Overall, a moderate share of the respondents associates the label with environment. The lowest share is found in France and Norway (approximately 20 percent) and the highest in England (32 percent). Finally a large share of the respondents says that they don't know the label. 42 percent of the Norwegian respondents don't know the label, while the amount is significantly lower in Germany with 22 percent of the respondents stating the same. The results indicate that the label is still not very well known among European consumers, but that the initial associations to the label are quite correct, namely that it is an organic and environmental label. A significant proportion of the English respondents also associate the label with fair trade and ethics.

Few of the respondents state that they have seen the label on T&C. The number is highest in France (14 percent) and Germany (13.5 percent) and lowest in Norway (4 percent).

Fairtrade certification is a product certification system designed to allow people to identify products that meet certain environmental, labour and development standards. The system involves independent auditing of producers to ensure that the agreed standards are met. The fairtrade certification mark is mainly used on food products, but it is also used to certify cotton. The fairtrade certification for cotton includes an environmental standard that restricts the use of agrochemicals and encourage sustainability (Fairtrade 2012). The main focus of the fairtrade label is thus neither organic nor environmental criteria, but on the social and economic aspects of production.



As illustrated in Figure 4.14 the main share of the respondents associates the fairtrade label with fair trade. Considering the design of the label which include the name "fairtrade" this is not surprising. A small share of the respondents says that they don't know the label and approximately 20 percent of the total respondents associate the label with ethics. These results indicate that the respondents know the label quite well. Many respondents state that they have seen the fairtrade label on textiles.



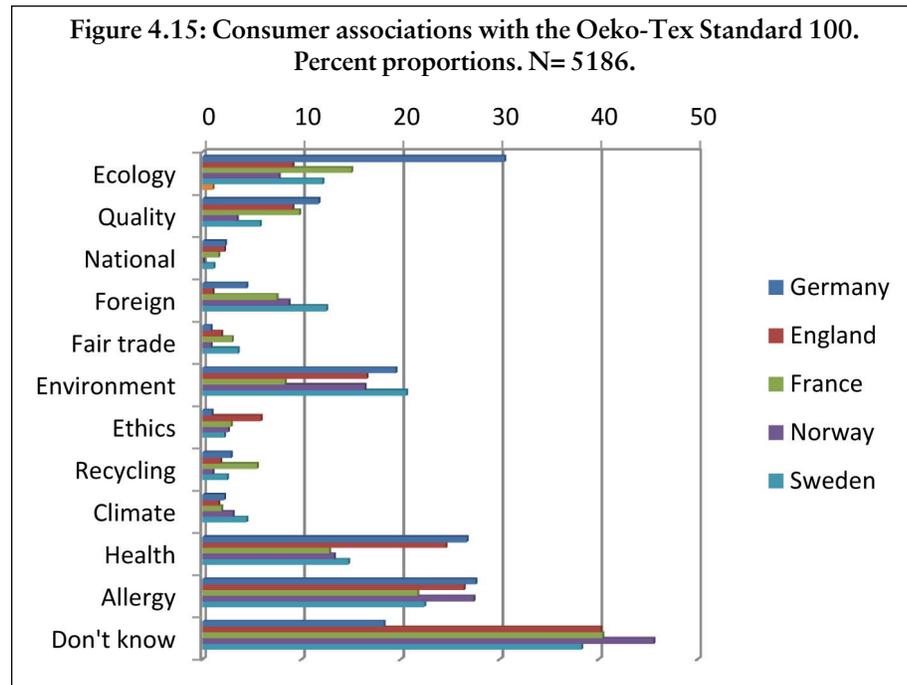
In England the number is as high as 70 percent, while 27 percent of the respondents in France say the same. Compared to the amount of fairtrade labelled textiles on the market, this share seems quite high. In Norway only nine cotton products are labelled with the fairtrade label (Fairtrade Norway 2012). It is thus a possibility that the respondents are thinking of fairtrade labelled products in general, and not fairtrade labelled textiles in specific.

The Oeko-Tex 100 label was introduced in 1992. It is a certification system for textile raw materials, intermediate products and T&C. The textiles certified by the Oeko-Tex Standard 100 are tested for harmful substances. This includes substances that are



prohibited by law, regulated by law, but also substances which are harmful to human health but still not regulated (Oeko-Tex 2012). However, the label is not an environmental label. Within its limited approach, mainly functioning as a health label, the Oeko-Tex 100 label has been very successful. Nearly 10 000 companies in 90 countries are today participating

in the Oeko-Tex 100 certification process, and about 90 000 certifications has been given to nearly 2 million products (Stø and Laitala 2011).



The results, shown in Figure 4.15, illustrates that there exists a degree of confusion among the consumers regarding the Oeko-Tex 100 label. This can be regarded as a bit surprising when the extent and success of the label is taken into consideration. Overall, a large share of the respondents says that they don't know the label. The knowledge is lowest among the Norwegian consumers of whom 45 percent state that they don't know the label and highest among the German respondents where only 18 percent states that they don't know the label. The fact that the label's origin is Germany and Austria might help explaining the high level of awareness in Germany. A moderate share of the respondents associate the label with ecology/organic and environment, but as mentioned, the label cannot be regarded as an organic or an environmental label.

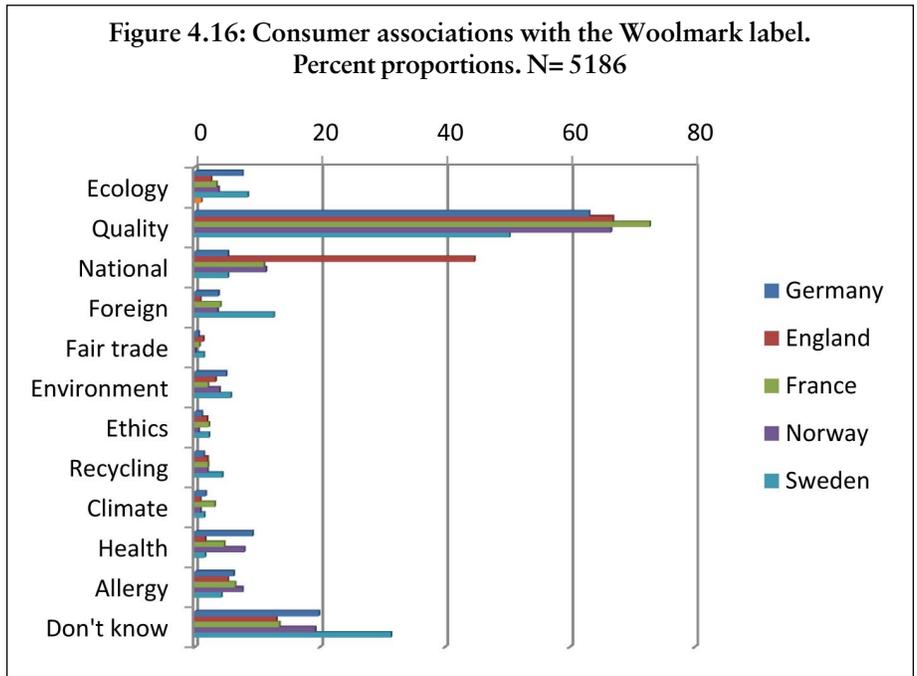
On the other hand, a larger share correctly associates the label with allergy, and another significant share associates the label with health. This indicates that there is a moderate correlation between the intended content and what people associate with the label. A moderate and very varying share of the respondents states that they have seen the label on clothing and/or textiles. The country variations are quite significant. In

Germany, 56.5 percent state that they have seen the label on textiles while the comparable number for England is only 3.5 percent and 6 percent in France.

The Woolmark brand/label is owned by the Woolmark Company and was established in 1964. The label is neither an organic nor an environmental label. The purpose of Woolmark is rather to be perceived as a quality brand. This is emphasised by the Woolmark Company as follows: “Companies that become Woolmark licensees can use the Woolmark logo on their products as an independent quality endorsement” (Woolmark 2012).



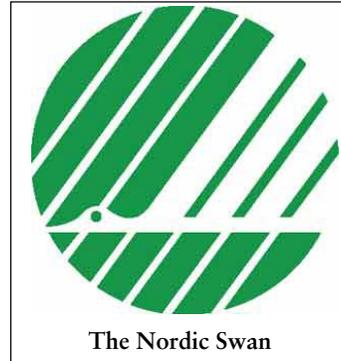
As illustrated in Figure 4.16 the majority of the respondents recognise the Woolmark label as primarily a quality label. A moderate share of the respondents, ranging from 13 percent in England and France to 31 percent in Sweden, states that they don't know the label. Very few associate the label with environment or ecology, which indicates that the respondents have not been affected by the survey design to believe that all labels are eco-labels.



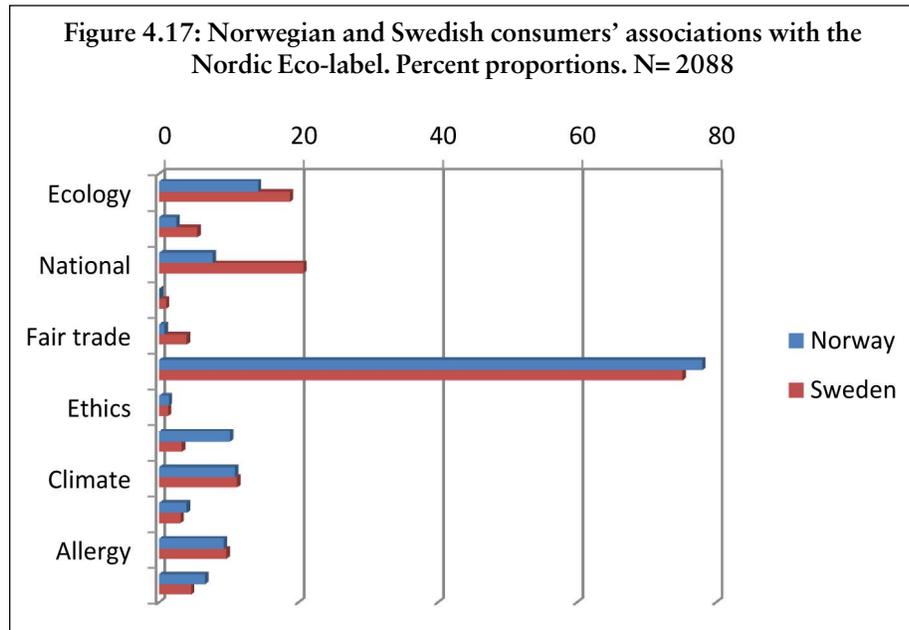
**National and smaller regional labels**

The national and smaller regional labels included in this survey are the Nordic Swan, the German Blue Angel, the Swedish Falcon, the French NF environment and the British Soil Association.

The Nordic Eco-label is the official Eco-label of the Nordic countries and was established in 1989 by the Nordic Council of Ministers with the purpose of providing an environmental labelling scheme that would contribute to more sustainable consumption (Nordic Eco-labelling 2012). The criteria for textiles are developed along the same guidelines as the EU-flower, with one major difference. For natural fibres, only organic fibres can meet the requirements. According to the labelling organisation:



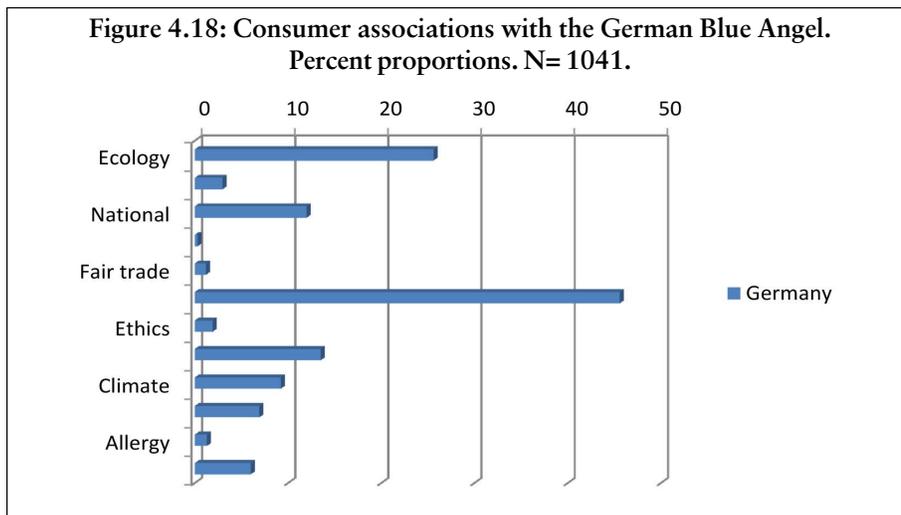
“products carrying the Nordic Eco-label meet extremely high environmental and often climate requirements” (Nordic Eco-labelling 2012). Today there are 63 products groups who meet the criteria requirements.



As much as 78 percent of the Norwegian respondents associate the Nordic eco-label with environment, while 75 percent of the Swedish respondents do the same. 14 percent of the Norwegian and almost 19 percent of the Swedish respondent associates the label with ecology and approximately 11 percent of the respondents in each country associate the label with climate. It is thus fair to say that the Nordic Foundation for Eco-labelling has been very successful in making the label well known among the consumers. 19 percent of the Norwegian respondents and 26 percent of the Swedish respondents states that they have seen the Nordic Eco-label on T&C.

As for most other labels discussed in this report, the respondents that claim to have seen the label on textiles are quite high compared to the labelled products available for purchase. This may, as mentioned earlier, indicate that the respondents have seen the label on other products.

The Blue Angel is a German eco-label. The label was established in 1978, and is the oldest eco-label in the world. The label is a voluntary, state-run eco-label and the criteria are established by the German Federal Environment Agency. Today, about 11,700 products and services in approximately 120 product categories carry the Blue Angel eco-label (the Blue Angel 2012). The Blue Angel adopted criteria for textiles in 2011, but currently no licenses to use the labels on textiles have been issued.



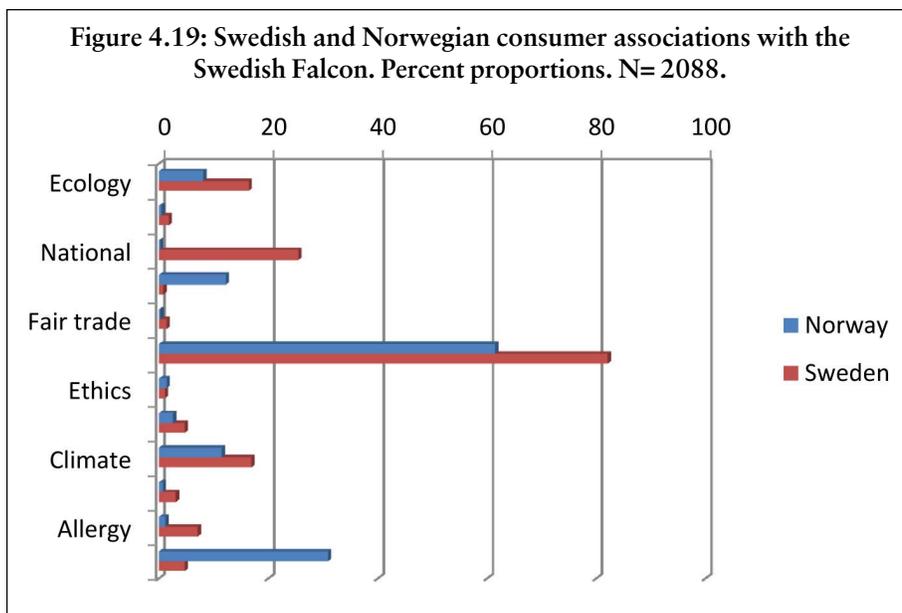
The results in Figure 4.18 illustrates that the German respondents mainly associates the Blue Angel label with environment (46 percent) and ecology (26 percent). This is not very surprising as the text included in the label (Jury Umweltzeichen) means eco-label. Other significant associations are recycling, climate and that the label is German. None of these associations are wrong, but they are not necessarily the intended content of the label. These results indicated that the knowledge about the label is quite high among the German respondents.

However, despite the fact that no licenses have been issued for using the label on textiles, an overwhelming 66 percent of the German respondents claim to have seen the label on T&C. This result thus confirms the suspicion discussed earlier, namely that the respondent answers on another question, whether if they have seen this label on products in general.

The Swedish Society for Nature Conservation (SSNC), a Swedish non-governmental organisation, has been elaborating criteria for environmentally friendly products since 1987. The “Bra Miljöval” eco-label using the falcon as its symbol was launched in 1992 (Naturskyddsföreningen 2012a). This is not an official national eco-label like the German Blue Angel, as it has not been established on government initiative. Like the EU-flower, the Nordic Swan and the German Blue Angel, the criteria are developed based on an assessment of life cycle analysis (Naturskyddsföreningen 2012b). On 1<sup>st</sup> of April 2012 SSNC launched new criteria for textile products which include very strict criteria for all types of textiles made of both synthetic and natural fibres, and on the entire production chain, from fibre to finished garment (Naturskyddsföreningen 2012c). Even though the label is Swedish, it can be found on several products in Norway. Norway is therefore included in the following presentation.

Among the Swedish respondents, 82 percent recognises the label as an environmental label. 25 percent states that it is Swedish, and respectively 17 and 16 percent associates the label with climate and ecology. Among the Norwegian respondents 61 percent recognises the label as an environmental label. As commented in connection with other labels, a reason for this high share might be that the title of the label is “good environmental choice”. 31 percent of the Norwegian respondents state that they do not know the label. 27 percent of the Swedish respondents





state that they have seen the label on textiles, while about 3 percent of the Norwegian respondents say the same.

NF-Environment is the official French eco-label together with the EU-flower. Development of the label began in 1989, but it was not fully operational until 1992. The main administrative body for the NF-Environment Mark is the AFNOR (Association Française de Normalisation), the standards institute of France. The NF-Environment Mark eco-labelling system is run by the Environmental Labelling Committee (Comité Français des Ecolabels, CFE), and their main responsibilities are the development of product group criteria. The CFE is made up of the representatives of industry, commerce, consumer and environmental groups, the Ministry of Industry, the Ministry of Environment, the Academic Committee, the ADEM (Environment Protection and Energy Agency), and of the AFNOR. The eco-label includes criteria for 49 product groups, among them textiles. The objective of the eco-label is to identify the best performing products from an environmental standpoint, and thus the maximum market share for a product category is 20 percent (NF Environment 2012).



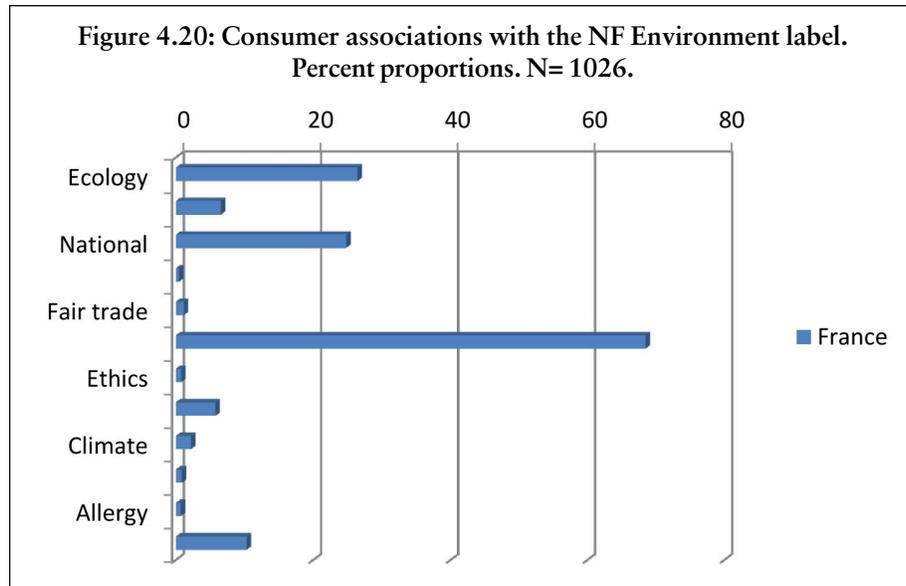
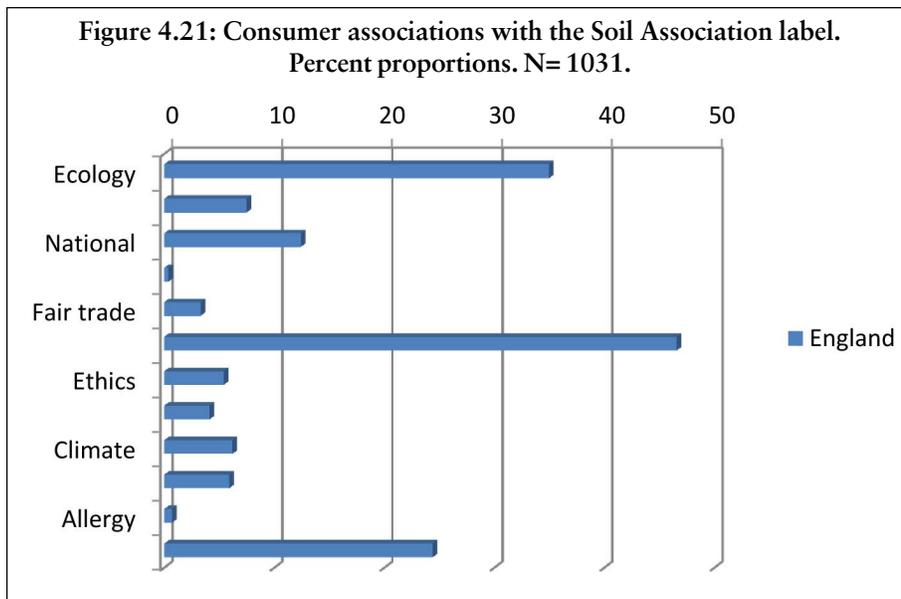


Figure 4.20 illustrates that the French respondents to a large extent recognise the official label as an eco-label. 68,5 percent associate the label with environment, 26,5 associates it with ecology and 25 percent identifies it as a French national label. These numbers indicate that the French consumers know their official national eco-label. As with some of the other labels presented, the high recognition rate might be a result of the label name which includes the word “environment”. 27 percent states that they have seen the label on textiles.



The Soil Association Certification Limited is wholly owned by the Soil Association, and has certified organic products since 1973. Over 70 percent of all organic products sold in the UK carry the Soil Association symbol (Soil Association 2012a). The label is thus mainly an organic label. The soil association has been working on organic textiles for over 10 years, and has played an important part in the development of the GOTS standard of which they own 25 percent of and certifies to (Soil Association 2012b).



The results indicate that almost 47 percent of the respondents associate the label with environment. Another 35 percent of the respondents associate the label with ecology. Organic production is the main focus of the Soil Association label, and the Soil Association emphasises on their websites that organic production is environmentally friendly production.

As much as 24 percent of the respondent state that they don't know the label and none of the respondents claims to have seen the label on textiles. This indicates that the Soil Association label is not as well-known as the other national eco-labels. This might be because the scope of the label is smaller than the other labels because it is primarily an organic label and because the Soil Association certifies for the GOTS label. The high level of awareness might as well be a result of the text included in the label's logo: Soil Association Organic Standard.

#### *Differences in global and national labels*

When the respondents' response pattern is compared it is clear that they are much more familiar with the national labels than the global labels like GOTS or the EU-flower. This can be a result of many factors. First of all, it is important to emphasise that the global labels in general are younger than many of the well-established national labels, and thus have had better time to get their word out to the consumers.

Secondly, the fact that many national labels were already well established when the global labels came into the market might have made

it harder for the global labels to succeed. To use Norway as an example, it has been a conscious strategy to promote the Nordic Swan instead of promoting the EU-Flower because the Nordic Swan is already well-known among Norwegian consumers (Austgulen and Stø 2013).

There are many labels the respondents do not know the meaning of, this seems to be the case for the global labels. A large share of the respondents, up to 40 percent state that they don't know some of the global labels. The pattern is however quite different for the national labels, where the respondents to a great extent claim to know the labels. This difference in consumer knowledge and confusion about certain labels becomes a problem when the global retailers prefer to use global labels (Austgulen and Stø 2013).

Another possible explanation of the differences in consumer awareness of the different labels might be that consumers are more familiar with the labels with a broad scope than the labels which are exclusively used on textiles. This pattern is evident as the consumer awareness of GOTS and Oeko-tex is quite low.

Consumer confusion about eco-labels must also be regarded as an obstacle for success in itself, as one of the aims of eco-labels is to create an easy identifiable and reliable mark of credibility (Gallastegui 2002:320). In this survey the respondents have not been asked about the credibility of the label. However, the consumers must first of all know the relevant labels, and this seems to be the main challenge for global eco-labels today.

### *National differences in the awareness of global labels*

When a respondent say that he/she doesn't know a certain label this also indicates that he/she cannot make use of the information given by the labels. The variation in the "don't know" frequency for some of the global labels (the EU-Flower, GOTS, Fairtrade and Oeko-Tex 100) can give an initial indication of how different groups of people handle the situation with a multitude of labels, and how the market (of labels) appears to them.

Table 4.13 illustrates the variation in awareness of four selected global labels across the five countries. The frequency on the row starting with 0 indicates the number of respondents who state that they don't know any of the four labels. The frequency on the following rows indicates the percentage of the respondents who know one of the four labels etc. The last row shows the percentage of the respondents who states that they associate all four labels with at least one of the given alternatives. This

does however not mean that they had the “correct” association with the label, only that they did associate it with some of the given alternatives.

The table reveals some interesting country variations. The respondents from Norway seem to be the ones least aware of the global labels; only 27 percent of the respondents associate all four labels with some of the alternatives presented. On the other side of the spectrum, the German respondents seem to be most confident on the meaning of the four labels.

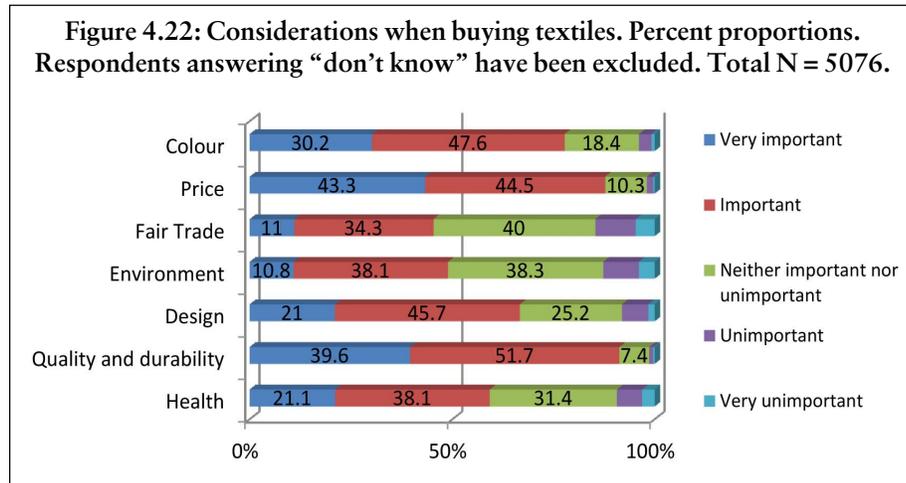
	Germany	England	France	Norway	Sweden
0	4.7	3.2	10.7	8.0	5.2
1	7.2	17.5	12.6	20.3	13.7
2	11.9	12.7	16.9	21.6	17.2
3	22.6	20.3	20.1	23.2	23.6
4	53.7	46.3	39.6	26.8	40.3
<b>Total N</b>	1045	1039	1028	1003	1089

One reason for the limited of awareness of especially global eco-labels among European consumers might be the little attention that has been given to this type of labels, and the competition between the national and the global eco-labels. In the previous report to this project based on qualitative interviews with Norwegian and Nordic stakeholders we found that the differences in stakeholder preferences regarding global and regional/national labels functions as a barrier for the use of eco-labels. Global companies like H&M prefer global labels while national organisations like the Foundation for Eco-labelling, which governs the official labels in Norway, prefer to use and promote the national labels that are already well known among the consumers (Austgulen and Stø 2013).

### **Political Consumption of Clothing**

It is natural to think that the respondents effort to familiarise themselves with new information, such as eco-labelling for textiles, varies with the respondents interests. In this section a set of questions reflecting what the respondents consider as important or unimportant when buying textiles is included. We asked the respondents to answer on a five-point

scale, where one stands for “very unimportant” and five stands for “very important”, how important or unimportant the following considerations are for them when buying clothes and textiles: “colour”, “price”, “fair trade”, “environment”, “design”, “quality and durability” and “health”.



Most of the respondents regard price, quality and durability as very important or important considerations when buying textiles. The least important considerations are fair trade, health and environmental considerations. It is natural to think that the respondents’ interests for these considerations vary with their interest in and knowledge about the eco-labels that exists on the market. It is therefore natural to expect that consumers that are better informed about the eco-labels that exist on the market, perceive environment as a more important consideration for them in purchasing considerations.

The answers to the statements illustrated in Figure 4.22 are relatively strongly correlated. This indicates that many respondents are concerned about several elements at the same time, while other respondents scored consistently low on several elements. In order to investigate this distinction between the respondents more closely a principal component analysis based on the questions in Figure 4.22 were undertaken. Two components were found, which together explained 59 percent of the variance in the responses to the relevant questions ( $KMO = .665$ ). The results from the component analysis with the dimensions and loadings are shown in Table 4.14.

<b>Table 4.14: Rotated component matrix. Extraction Method: Principal Component Analysis.</b>		
	Component	
	1	2
Health	.765	.068
Quality and durability	.392	.509
Design	.039	.731
Environmental considerations	.904	.042
Fair Trade	.870	-.003
Price	.019	.624
Colour	-.043	.814
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalisation. a. Rotation converged in 3 iterations.		

The result show that the respondents who argue that environmental considerations are important, also emphasises fair trade, health and to a certain degree quality. On the other hand, the respondents who emphasise design also argue that price and colour as well as quality are important considerations for them when shopping for clothes and textiles. Quality and durability loads moderately on both factors, which are natural as quality and durability can be seen as important both if the consumer is concerned about the environment and if the consumer are concerned about design etc.

Based on this factor analysis it is clear that the first dimension is characterised by more collective values while the second dimension is characterised by more individualistic/materialistic values. The first factor may thus represent the political consumers, who applies values other than purely self-interested ones in consumer choice situations (Micheletti et al 2004:xiv).

According to Stolle and Hooghe (2004:256) political consumers attach great importance to non-economic values (like political and ethical values and social attitudes) when they choose products and this dimension also seem to be present among the consumers of textiles. The second factor represents the more materialistic consumers that are appreciating “value for money” and fashion when buying textiles.

By using the loadings on component one from the component analysis an index called the political consumer index were constructed. This index

was found highly reliable ( $\alpha=.815$ ). The national variances in the index are illustrated in Table 4.15. For illustrative purposes the index has been adapted to the five-point scale. Based on the results presented in Table 4.15 there seems to be significant differences in the number of “political consumers”, as they have been defined in this report, between the countries. Among the Swedish respondents more than 60 percent of the respondents scores high on the political consumer index. A significantly smaller share of the English respondents can be characterised as political consumers based on the index constructed.

	Germany	England	France	Norway	Sweden
Very unimportant	1.1	2.6	2.1	2.7	1.3
Unimportant	9.0	12.4	9.1	8.0	4.6
Neither important nor unimportant	37.1	45.7	34.7	44.6	32.7
Important	44.0	33.3	41.8	39.0	47.2
Very important	8.9	6.0	12.4	5.7	14.1
Total N	1035	1023	1015	989	1063

The variances in the index, in other words – why some respondents prioritise health, environment and fair trade considerations higher than others – based on demographic variables, awareness of the global eco-labels, perceptions of responsibility and acquisition variables will be explained. These variables, and several others, will be presented in the following chapters.

## **Environmental Considerations**

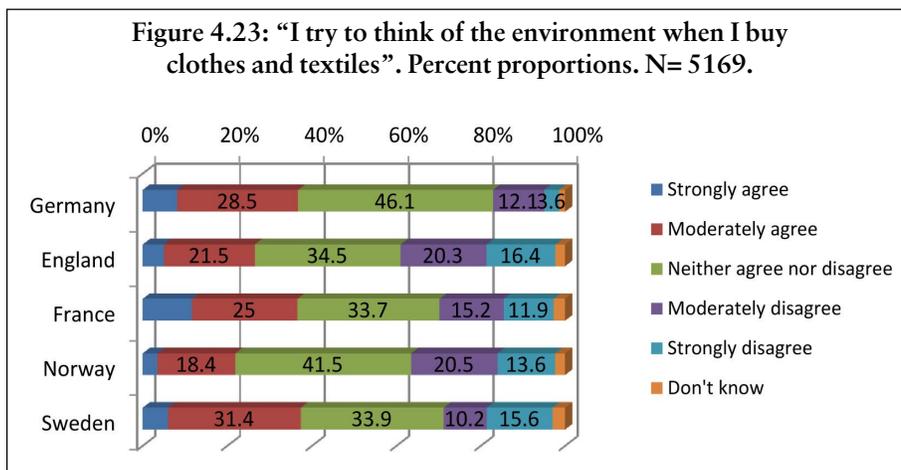
As seen in the previous sections, the consumer knowledge and awareness about specific (eco-)labels for textiles are varying, and the awareness of global and regional labels like the EU flower are among the lowest. Buying eco-labelled products are however not the only possibility if the consumer would like to take environmental considerations related to their consumption of textiles. Other strategies might be to reduce the consumption of textiles, extending the length of use by repairing the textiles and to wash the clothes more effectively and less often. The respondents' preferences of these different strategies will be discussed in the end of this chapter. First, we will present the findings from the consumer survey

concerning consumer preferences, practices and perceptions of environmental strategies when buying textiles.

### *Consumer Preferences and Intentions*

Overall, a fair share of the respondents in all countries agrees with the statement “I try to think of the environment when I buy clothes and textiles”. From 23 percent of the Norwegian respondents to 37 percent of the Swedish respondents answer that they either moderately or strongly disagree with the statement. Based on Figure 4.23 we can see that the Norwegian respondents are the ones that report to be least concerned about the environment when buying textiles. The respondents from Germany, France and Sweden are the most concerned. More women (mean=1.95) than men (mean=2.08) (independent samples t-test,  $t(4531)=3.979$ ), and more old people than young people (persons Chi-Square  $p=.000$ ), state that they try to think of the environment.

These numbers can be seen in relation to the results from the Eurobarometer from 2012 (pp. 149-151) on a question about environmental impact and purchasing decisions. The consumers were asked whether the environmental impact of a product/service had an influence on their purchasing decision during the week prior to the interview. 29 percent of the respondents said that the environmental impact influenced their purchasing decision while for the large majority of 69 percent answered that the environmental impact had no influence on their choice. The percentages of the respondents answering “yes” were the following for the respective countries: 29 percent in Germany, 22 percent in the UK, 33 percent in France, 24 percent in Norway and 40

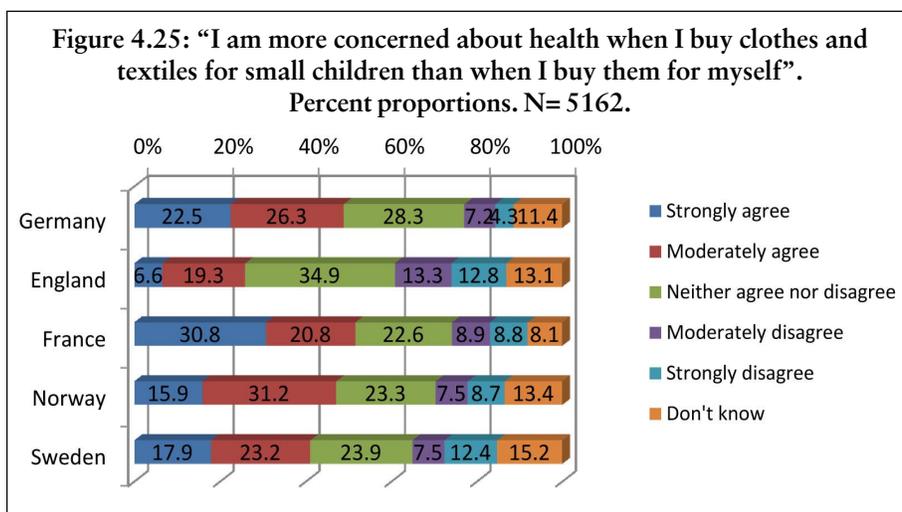
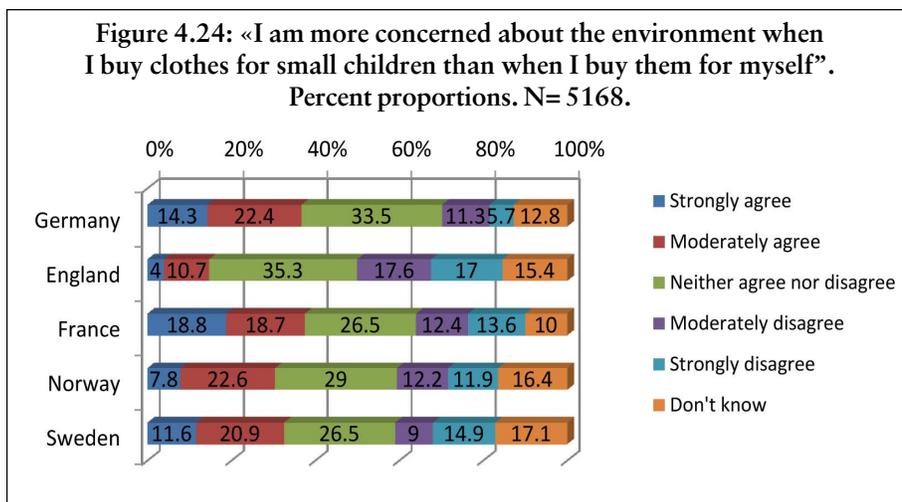


percent in Sweden. These results thus correspond to the results from our survey on environmental considerations when buying T&C.

According to several stakeholders to the textile industry one window of opportunity for expanding the use of eco-labels is on textiles for small children (Austgulen and Stø 2013). Consumers are according to several of the stakeholders that were interviewed, more concerned about the content of the products when its intended users are small children, mainly because of health concerns. We therefore chose to include questions in the survey distinguishing between “small children” and “myself” and between environmental concerns and health. Figure 4.24 and Figure 4.25 illustrate the responses to two statements differentiating between health and environment. The results are in line with the findings from the stakeholder interviews - the respondents are more concerned about health issues when buying textiles (for themselves and for small children) than environmental issues (Austgulen and Stø 2013).

From 15 percent of the respondents in England to approximately 37 percent of the respondents in France and Germany moderately or strongly agree to the statement that they are more concerned about the environment when they buy clothes for small children than when they buy them for themselves. From 27 percent of the respondents in England to 47 percent in Norway and 49 percent in Germany agree with the statement that they are more concerned about health when they buy clothes for small children than when they buy them for themselves. Quite a few of the respondents in all countries answer that they neither agree nor disagree and that they don't know, which indicates that the respondents might have problems relating to the question.

If the respondents do not usually buy clothes for small children, this question will be hard to answer. As eco-labelled clothes often are better for health because of lower use of toxic chemicals, these results indicate that there is a stronger market for eco-labelled textiles for small children than for adults. Women and older respondents are more concerned about the environment when they buy clothes for small children than men and younger respondents. The pattern is similar regarding health consideration, although the age differentiation is not equally strong.

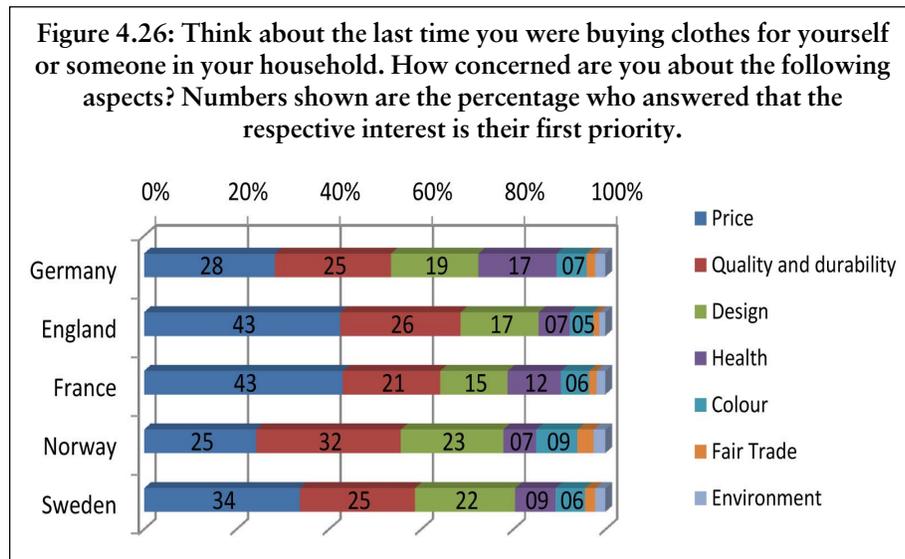


### Reported Practices

Consumption of textiles is a part of people’s daily life and routines. Clothes satisfy a wide variety of the consumers’ needs as they protect, define a person’s role in social groups or are a part of a person’s expression of life-style. According to Meyer (2001:320) consumers’ general textile decision process follows a specific order: at first, consumers take those products into consideration that they like because of their visual appearance (colour, shape, style). Second, they try on the product (fit, wearing, size, and comfort) and check the price in relation to performance. The most important criteria in terms of cost and benefit are thus appearance, functionality and price (Meyer 2001:321-321).

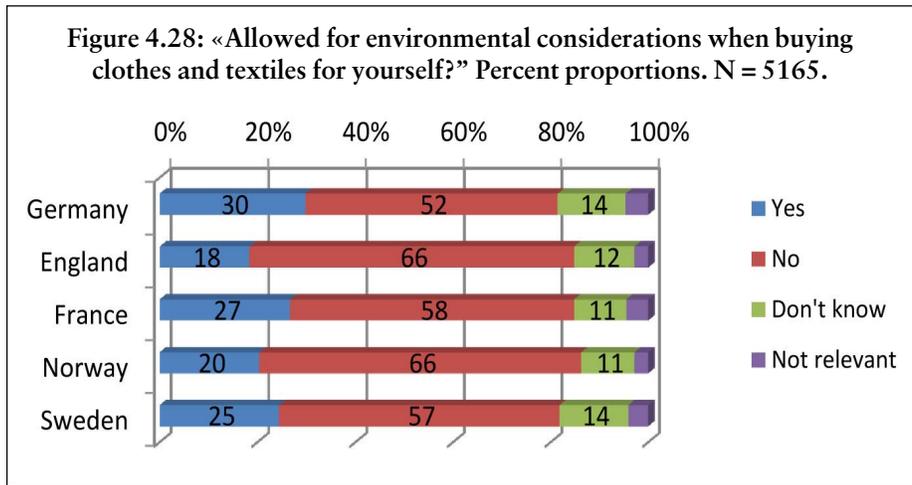
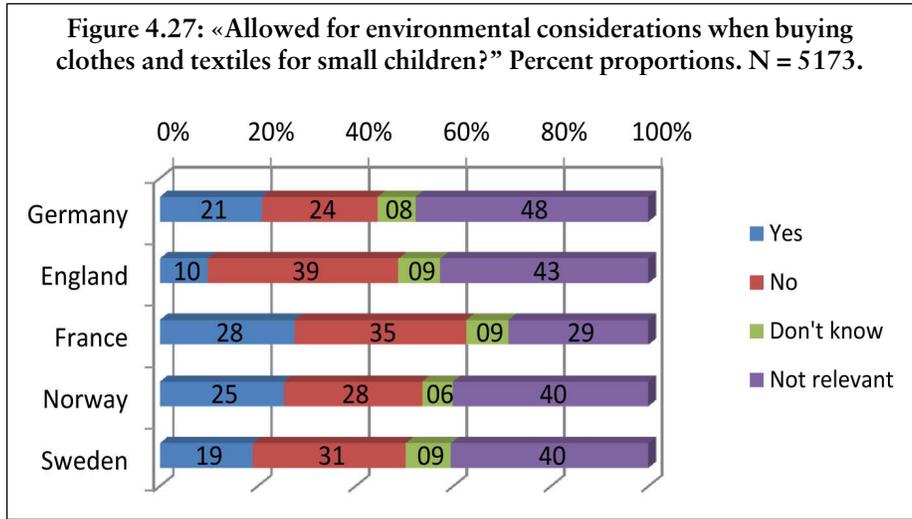
Figure 4.26 illustrates the respondents ranking of some of the different considerations he/she can take when buying textiles. The figure shows the percentage that has chosen the respective consideration as their first priority. The trend is similar in all countries, price, quality and durability and design are the most important considerations. Environment is together with fair trade the least important consideration in all countries.

These results are in line with the results presented in chapter 5 regarding which aspects the respondents considered as important when buying clothes and textiles. There seems to be only slight differences between women’s and men’s T&C related preferences. There were no significant differences in their ranking/preferences for fair trade, environment or price, but women (mean=3.61) were significantly more concerned about colour than men (mean=3.96) (independent samples t-test.  $t(4256)=6.589$ ), and men (mean=2.61) were significantly more concerned about quality and durability than women (mean=2.94) (independent samples t-test.  $t(4268)=7.100$ ). There were no significant differences in their concern over design.



Despite the fact that environment is the lowest priority for the respondent when buying clothes, a substantial amount of the respondents report that they have allowed for environmental considerations when buying clothes and textiles for small children (Figure 4.27) and when buying clothes and textiles for themselves (Figure 4.28). Based on the response pattern respondents from Germany and France seem to be most

active in taking environmental considerations while respondents from England are the least active. Women (mean=2.62) report to have taken environmental considerations significantly more often than men (mean=2.72), both when buying clothes and textile for small children (independent samples t-test,  $t(4714)=2.966$ ). There are no significant gender differences for taking environmental considerations when buying textiles for themselves.



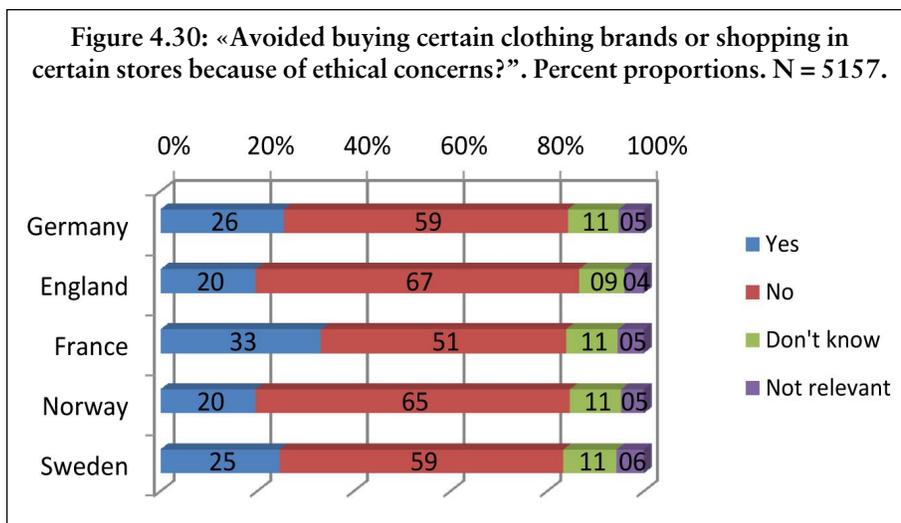
Lastly, we were interested in whether the respondents had bought clothes with an eco-label or other ethical or ideal labels, and if the consumers are using boycott strategies To buy eco-labelled products is, according to Micheletti (2004), a “buycott”-strategy which is part of a positive consumer choice institution (a selective preference of goods). Eco-labelling schemes thus intend to help consumers to practice political consumerism.

Overall, approximately 20 percent of the respondent in all countries report that they have used this strategy because they have bought clothes or textiles with special labels to support the sales of these products, such as fair trade and eco-labels during the last twelve months (Figure 4.29).

Considering that the amount of eco-labelled garments that are available for purchase are low and that it most likely varies between the countries studied, these results seem to indicate an over-reporting among the respondents. It might as well be possible that they are thinking of other environmental strategies undertaken when they purchased a specific textile.

An even higher share of the respondents, ranging from 19 percent in England and Norway to 33 percent in France, state that they have used the boycott strategy and thus have avoided buying certain clothing brands and shopping in certain stores because of ethical concerns during the last 12 months (Figure 4.30). The respondents in France and England are slightly more prone to use the buycott strategy than respondents in Norway and Sweden. The respondents from France are however more prone to use the boycott strategy than respondents from Norway and England.





### Best Strategies

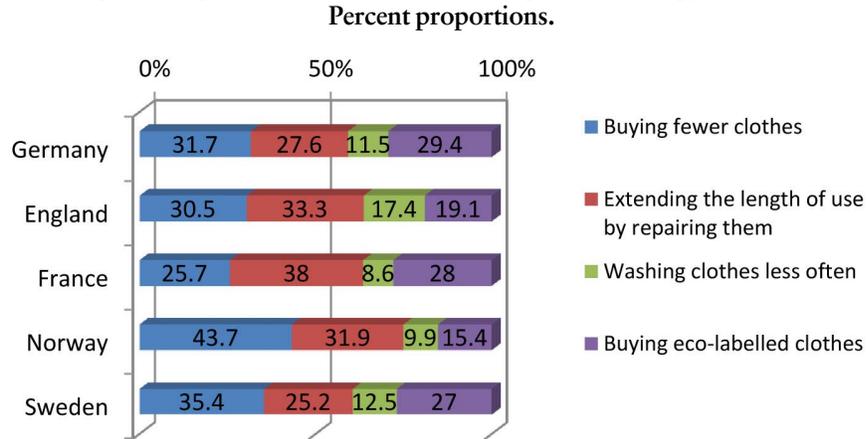
The main purpose of the project “A Study of Environmental Standards and their Trade Impacts: the case of India” is to generate improved understanding of the potential for environmental and social labels as a communicative tool among European consumers and Indian producers. It is therefore important to investigate whether eco-labels at all are considered as a good strategy by the consumers, both regarding the division of responsibility between the consumers, policy makers and the textile industry and compared to other potential solutions which are directly available for the consumer.

Eco-labelling is one of many possible solutions to the challenges in the textile industry, and we asked the respondents which strategies they considered as the best for the environment of the following: buying fewer clothes, extending the length of use by repairing them, washing clothes less often and buying eco-labelled clothes (Figure 4.31).

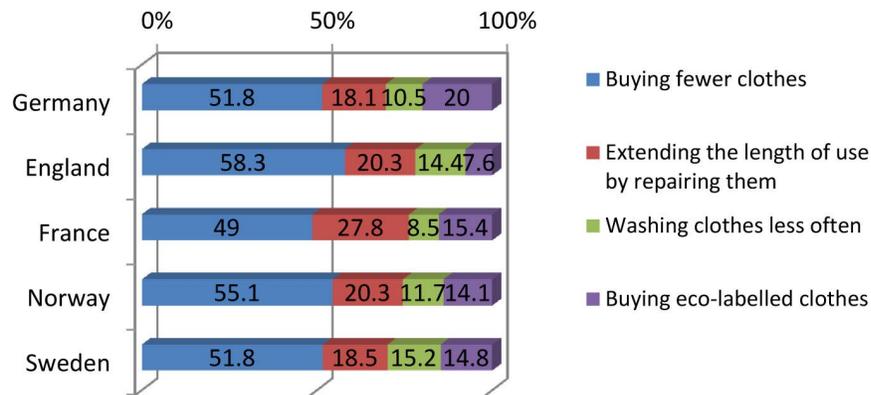
Not surprisingly, many respondents in all countries think that buying fewer clothes is the best strategy. However, buying eco-labelled clothes is regarded as the second best alternative in Germany, France and Sweden. Only 15 percent of the Norwegian respondents considered the strategy of buying eco-labelled clothes as the best strategy for the environment. At the same time, very few of the respondents overall think that washing clothes less often is the best strategy for the environment, although many Life Cycle Assessment studies on clothing show that the use phase is the most energy demanding phase (Dahllöf 2004 and Madsen et al. 2007 in Laitala and Klepp 2013).

What the respondents considers being the best strategy for the environment might not be their preferred strategy or the strategy which is the easiest for them to implement. We therefore asked the same respondents which of the strategies that it would be easiest for them to implement in their current situation (Figure 4.32). The results indicate that more than 50 percent of the respondents in all countries (except for France where the number is 49 percent) consider buying fewer clothes as the easiest solution for them to implement. Very few of the respondents

**Figure 4.31: «Which of the following strategies do you think are the best for the environment, and which are the worst?». Numbers shown are the percentage who answered that the respective strategy is best.**



**Figure 4.32: «In your current situation, which of the following strategies would it be easiest for you to implement?». Numbers shown are the percentage who answered that the respective strategy is the easiest to implement. Percent proportions.**



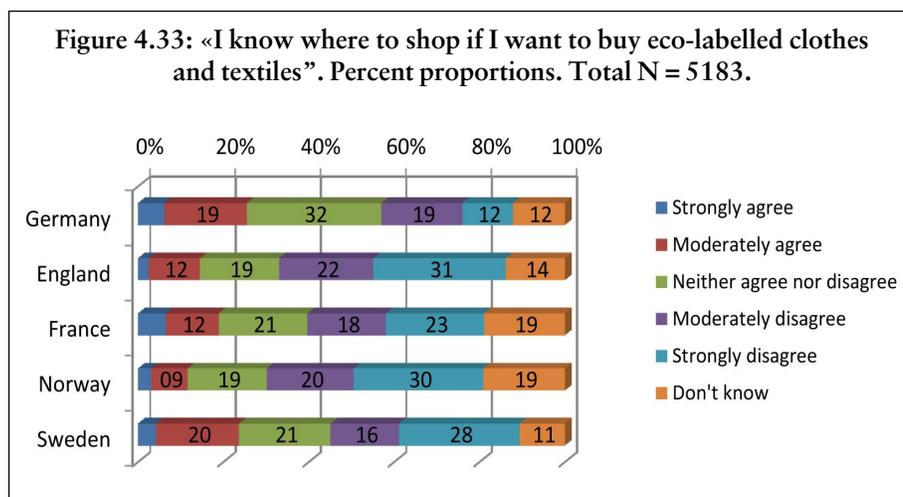
(ranging from seven percent in England to 20 percent in Germany) consider buying eco-labelled clothing as the best alternative. This might be the case because very few eco-labelled garments are available for purchase today.

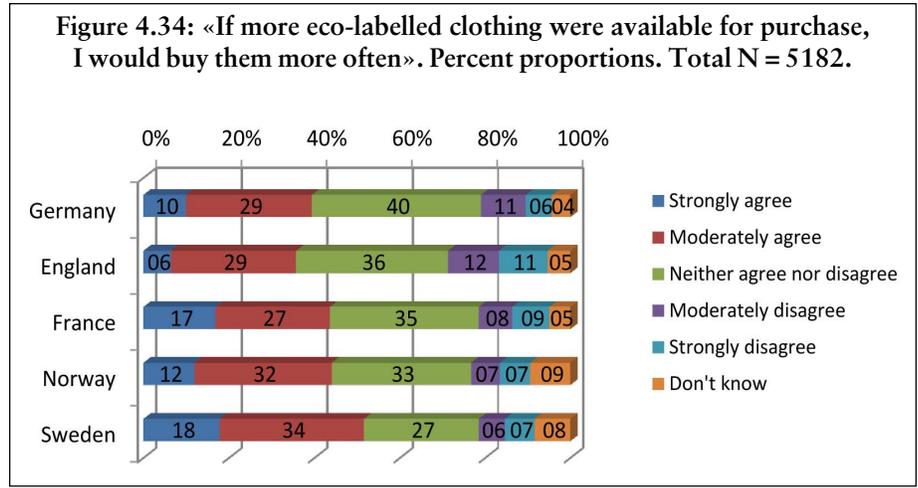
### Availability and Willingness to Pay

We can assume that purchasing routines will be influenced by practical considerations and possibilities that are made available where people normally shop for textiles. In this survey we have asked the respondents about their willingness to pay for eco-labelled textiles as well as how the availability of eco-labelled textiles affects their purchases.

We first turn to what people think about the availability of eco-labelled clothes and textiles. The respondents were asked to consider the following statement: “I know where to shop if I want to buy eco-labelled clothes and textiles”. The results, illustrated in Figure 4.33, show that very few respondents answer that they strongly agree with the statement while a majority answer that they disagree or don’t know. The Norwegian respondents seem to be least knowledgeable regarding where to shop, while the German and the Swedish respondents are most knowledgeable.

A substantial share of the respondents agree with the statement “If more eco-labelled clothing were available for purchase, I would buy them more often”, ranging from 25 percent of the English respondents to 51 percent in Sweden (Figure 4.34). This indicates that availability is a serious challenge for the success of eco-labels.





As demonstrated earlier in this report, price is a very important factor when buying clothes and textiles for the respondents in this survey. Because the respondents seemed to be more prone to buy eco-labelled clothing for children than for themselves we included two questions about the consumers’ willingness to pay more for environmentally friendly clothing for themselves and for small children. From 22 percent of the respondents in England to 48 percent of the respondents in Germany agree with the statement that they are willing to pay more for environmentally friendly clothing for small children while 27 percent of the English respondents and 43 percent of the German respondents agree that they are willing to pay more for environmentally friendly clothes for themselves (Figure 4.35 and Figure 4.36).

These results do however not say anything about how much more the respondents are willing to pay extra for eco-labelled clothes and textiles, and the analytical validity of the estimates in Figure 4.35 and Figure 4.36 are weak, as they are derived from a consumer survey which do not satisfy the strict protocols of the contingent valuation method or, from an analysis of price data. The results do however say something about the respondents’ attitudes to eco-labelling of textiles, and by agreeing to the statements they indicate that they are positive towards eco-labelling, even though it can include higher prices on the products.

Figure 4.35: «I am willing to pay more for the clothes and textiles that I buy for small children if I am guaranteed that they have been produced in an environmentally friendly manner». Percent proportions. N= 5177.

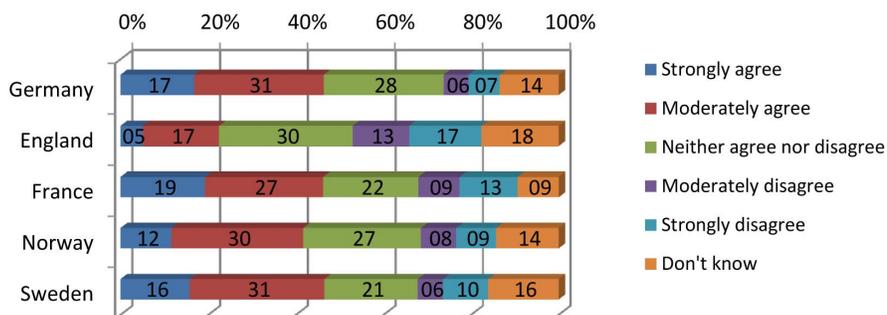
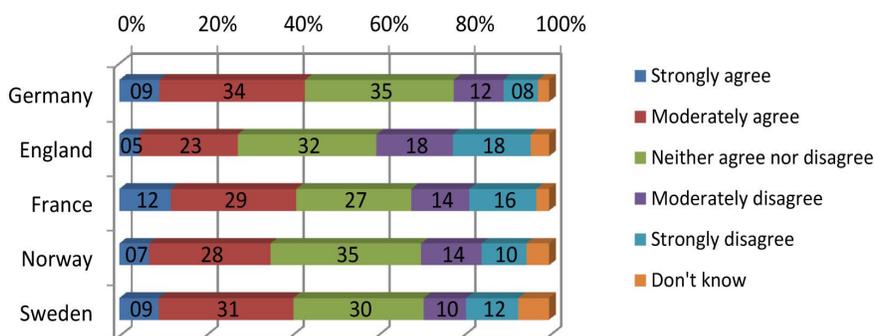


Figure 4.36: «I am willing to pay more for the clothes and textiles that I buy for myself if I am guaranteed that they have been produced in an environmentally friendly manner». Percent proportions. N = 5175.



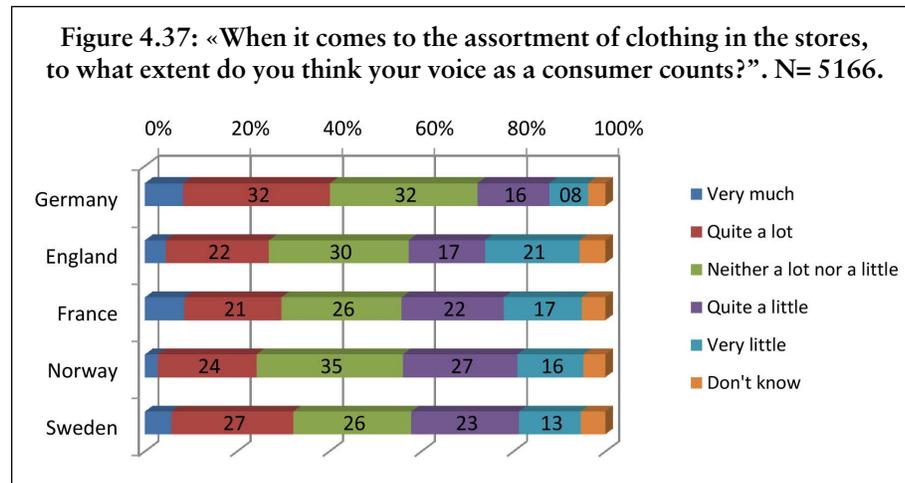
## Responsibility

One of the main questions forming the basis for this report is the question of responsibility. The potential success of eco-labels as a strategy for improving the environmental consequences of textile production and consumption do to a certain extent depend on the consumers' perceptions of responsibility. The consumer must for example feel that he/she has a say as a consumer and that consumer mobilisation/participation is somewhat effective.

An important aspect of responsibility is whether the consumers trust the other actors on the market. Effective communication in the form of eco-labels requires that people trust the actors involved in the

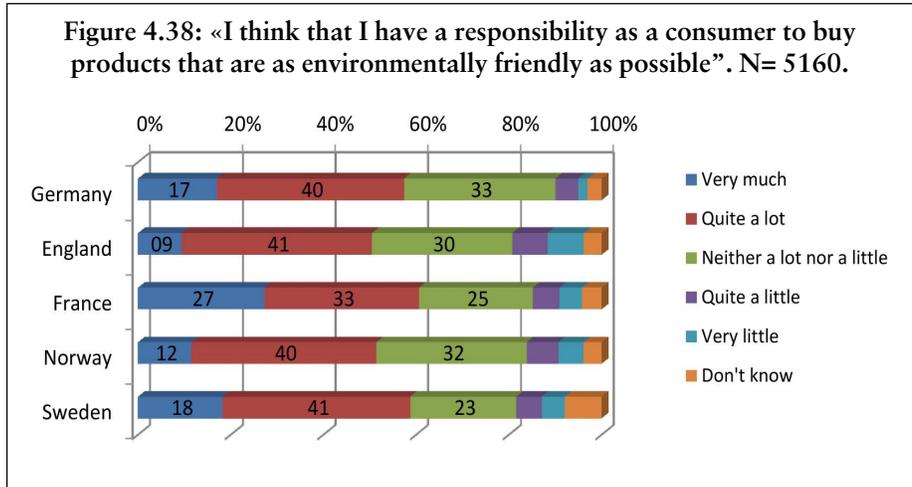
communication. For people to participate and take on responsibility it is necessary with a certain level of shared norms and expectations. Other (important) actors must be believed to contribute, to be reliable and to follow their own goals at the cost of the consumers' and general interest (Kjærnes et al 2009:23).

First, the respondents were asked how much they perceived that their voice as a consumer count when it comes to the assortment of clothing in the stores (Figure 4.37). The differences between the respondents in the different countries are not great, but still statistically significant (one-way ANOVA,  $F=23.263$ ,  $p=.000$ ). In Germany 41 percent of the respondents think that their voice as a consumer counts "very much" or "quite a lot", while the comparable number for the Norwegian respondents are 26.5 percent.

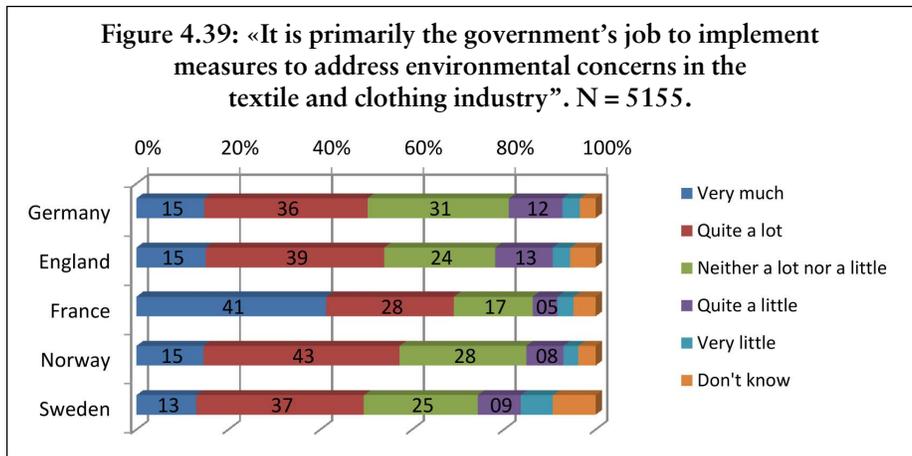


Second, the respondents were asked about their perceptions of their own responsibility as consumers to buy products that are environmentally friendly. The feeling of responsibility are highest in Germany where 57 percent of the respondents argued that they have a responsibility and lowest in Norway and England where approximately 51 percent are of the same opinion. The French respondents' response pattern differs a bit from the other nations as more than 27 percent answered that the consumers have "very much" responsibility. This is quite much compared to the corresponding numbers in the other countries. The national differences are statistically significant (one-way ANOVA,  $F=24.058$ ,  $p=.000$ ). In total for all countries, women (mean=2.30) report significantly more often that their voice as a consumer counts than men (mean=2.53) (independent samples t-test,  $t(4516)=7.796$ ). Women

(mean=3.23) also significantly more often than men (mean=2.38) report that they have a responsibility as a consumer to buy environmentally friendly products (independent samples t-test,  $t(4738)=3.846$ ).

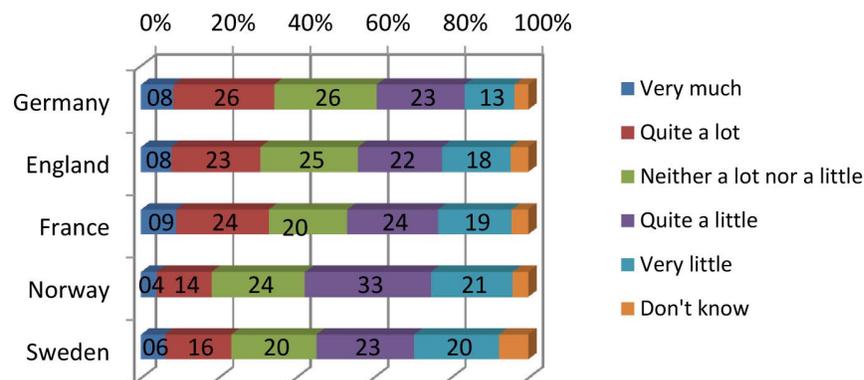


Third, the respondents were asked about the governments' responsibility, and the national differences are significant (Figure 4.39) (one-way ANOVA,  $F=52.815$ ,  $p=.000$ ). Again, the French respondents score highest on the statement, strongly agreeing that it is primarily the governments' job to implement measures to address environmental concerns in the T&C industry (69 percent). At the other end of the scale, the Swedish respondents are much less inclined to place the responsibility on the government (49 percent). Overall, women (mean=2.32) are significantly more inclined to place the responsibility on the government than men (mean=2.43) (independent samples t-test,  $t(4378)=3.557$ ).



Fourth and last, the respondents were asked about their trust in the T&C industry to take environmental considerations into account when producing their goods (Figure 4.40). The country variations are significant (one-way ANOVA,  $F=38.357$ ,  $p=.000$ ), and the Norwegian respondents are the ones placing least trust in the industry (18 percent). On the other end of the scale, the French respondents place the most trust in the industry (31 percent). In contrast to the other statements the respondents were asked to consider, a substantial share of the respondents chose to use the opposite end of the scale (very little and quite a little) much more on the question of trust in the industry. Significantly more women (mean=3.21) than men (mean=3.38) stated that they trust the industry very much or quite a lot (independent samples t-test,  $t(4458)=4.538$ ).

**Figure 4.40: «I trust the textile and clothing industry to take environmental considerations into account when producing their goods». N = 5166.**



### Differences in Considerations when Buying Clothes and Textiles

In chapter 5 a set of questions about what the respondents considered as important when buying textiles were discussed. Based on a component analysis we created the additive index “political consumer index” comprising of the questions about health, environmental considerations and fair trade that all loaded on the same factor. In this chapter we use this index as the dependent variable in regression analysis, and thus seek to explore the variation in the respondents’ considerations when buying clothes and textiles.

Why do some respondents score higher on the political consumer index than others, and thus (claim that they) place more weight on considerations like health, environment and fair trade when buying textiles than others? Since the total survey sample is not representative for the population in all countries in total because of the variations in country size, five different regressions is undertaken, one for each country. By doing this we can study if some variables are more or less important for explaining political consumption in the different countries

### *Variables in the Regression Analysis*

The basis for the dependent variable is described in chapter 5, and the index used in the regression ranges from 0 (perfect materialistic consumer) to 12 (perfect political consumer). In addition to demographic variables, the effect of the following independent variables will be tested: responsibility, awareness of eco-labels and purchase variables. Most of the questions representing these variables have been presented earlier in the report. In order to identify the relative importance of the different independent variables and their ability to explain the variation in the respondent's considerations when buying textiles a stepwise linear regression analysis is conducted. In order to include as many observations as possible in the analysis we include rest categories for variables with many invalid observations; these rest categories are not always substantively interpretable. The variables included in the regression analysis are identical for each country.

The first set of variables that is introduced in the regression, the demographic variables, is gender (0=male, 1=female), age (from 18 to 83) number of children (from 0 to more than 3) in the household and self-evaluated level of the households' economy. This is measured based on the question "How would you describe your household's economy the past twelve months?" and the respondents were asked to answer on a five-point scale from very poor (0) to very good (4). The rest category includes the respondents answering that they don't know or prefer not to answer. Ideally a variable based on a question of actual household income would have been included, but very many respondents have chosen not to answer the question, and thus there are too many missing values. Based on the data presented earlier in the report it is expected that women score higher on the political consumer index than men. Number of children can be expected to affect the dependent variable in both directions. It is possible that respondents with many children are in a more pressured economic situation than other respondents, and thus would take other

considerations when buying textiles. On the other hand, we have seen that respondents are more prone to buy eco-labelled or health-labelled garments for small children, and it could thus be expected that number of children correlate positively with the dependent variable.

The second set of independent variables that is included in the regression is trust in the industry. Trust is measured by asking the respondents to consider (on a five-point scale) if they disagree (0) or agree (4) with the statement “I trust the textile and clothing industry to take environmental considerations into account when producing their goods”. The rest category includes the respondents answering that they don’t know and the ones who did not answer. It is natural to think that respondents that don’t trust the industry to take environmental considerations into account when producing their goods will feel more obliged to take environmental considerations themselves.

The third model includes the knowledge index. The index range from respondents who don’t know any of the four global labels (0) to the respondents who associates all four labels with any of the given alternatives (4). The score on the political consumer index is expected to increase with increased awareness of the labels.

The fourth, and final, model includes the purchase variables. The first variable, willingness to pay, is measured based on the respondents’ considerations (on a scale from 0=strongly disagree to 4=strongly agree) of the statement “I am willing to pay more for the clothes and textiles that I buy for **myself** if I am guaranteed that they have been produced in an environmentally friendly manner”. The rest category includes the respondents answering that they don’t know and the ones who did not answer. The second variable, availability, is measured with the respondents’ considerations (on a scale from 0=strongly disagree to 4=strongly agree) of the statement “I know where to shop if I want to buy eco-labelled clothes and textiles”.

The rest category includes the respondents answering that they don’t know and the ones who did not answer. The third variable, purchase, is measured based the respondents’ responses to the question if the respondents during the past 12 months had “bought clothes or textiles with special labels to support the sale of these products, such as Fair Trade or eco-labels”? The variable is recoded into a dummy variable where the respondents’ answering that they “don’t know” constitutes the reference category in the analysis.

### ***Results***

In order to identify the independent variables' relative importance and their ability to explain the differences in emphasis on health, environment and fair trade when buying textiles, we conducted a stepwise linear regression analysis. The independent variables were introduced in four models as explained above. Testing of residuals and homoscedasticity indicates that the assumptions of normal distribution of residuals and linearity are met. The tolerance and variance inflation factors do not indicate multi-collinearity. Separate regression analyses for each country are conducted, and the results are summarised and presented in Table 4.16.

Model one includes the demographic variables gender, age, children under 15 years in the household and self-evaluated income level and explains almost two percent of the variation in the dependent variable among English respondents and explains almost 11 percent of the variation in the dependent variable among the Norwegian respondents. Gender is a significant variable in all countries and the results indicate, as expected, that women score higher on the political consumer index than men in all countries.

Number of children under 15 in the household is not a significant explanatory variable in any country except from in Germany, where people with children under 15 years in the household score higher on the political consumer index than respondents without children under 15 years in the household. Self-evaluated income is an insignificant variable in all countries except from England, where people who perceive their household economy to be better than the reference group (very poor) score higher on the political consumer scale.

In model two the trust variable are introduced and the increase in explained variance varies between the countries. The variability change is not significant in Germany, which indicates that the trust variable does not help to explain the variation in the dependent variable. The change in variability are however significant in the other four countries, increasing the explained variance with approximately one percentage point in Sweden and two percentage points in England, France and Norway. The trust variable is however not significant for Sweden or France. The coefficients are positive for England and negative for Norway. This indicates that the higher trust the respondents in England have to the industry the higher they score on the political consumer index. In Norway however, increased trust is correlated with lower scores on the political consumer index.

Model three includes the knowledge variable, measuring the respondents' self-reported awareness of five global labels. The variability change is significant for all countries, and ranges from one percentage point in Norway to 3.5 percentage points in England. The coefficients are positive in all countries, indicating that the more aware the respondents are about the global labels, the higher score they get on the political consumer index.

In the last model, model four, the purchase variables are introduced. The introduction of these variables results in a big jump in the explained variability for the overall model in all countries. For Germany the increase is more than 30 percentage points and the final model explains 41.6 percent of the variation in the dependent variable. For Norway the increase is more than 24 percentage points and the final model explains almost 38 percent of the variation in the in the dependent variable.

The consumers' self-reported willingness to pay is a significant explanatory variable in all countries, and not surprisingly the respondent claiming that they are willing to pay more for the textiles they buy for themselves score higher on the political consumer index. Likewise, respondents that agree to the statement that they do know where to shop if they want to buy eco-labelled clothes score higher on the political consumer index than the respondents who don't know where to find these products.

The last variables introduced are based on the question if the respondents have bought clothes or textiles with special labels to support the sale of these products during the past 12 months. The variable "bought labelled clothes" are significant in all countries but Sweden, and respondents claiming to have bought labelled textiles score higher on the political consumer index than respondents who answer that they don't know. The variable "not bought labelled clothes" are only significant in Germany and in Sweden, and respondents claiming that they have not bought labelled clothes score lower on the political consumer index than the reference category, the respondents answering that they don't know.

When the purchase variables are introduced in the final model we observe several changes in the other independent variables. The knowledge variable loses its significance in all countries but England, and self-evaluated income becomes significant in England and Sweden. Gender loses its significance in England. In Germany, number of children under 15 in the household loses its significance.

These results indicate that the purchase variables are the most important variables in explaining why environment, health and fair trade are more important considerations for some respondents than for others. The

respondents who know where to buy eco-labelled clothes, have bought labelled clothes before and the ones who are willing to pay more for labelled garments are more prone to consider the environmental, health and fair trade aspects of their purchases.

In addition to the significance of the purchase variables, the results show that women are more prone to take health, environment and fair trade considerations into account when buying clothes and textiles in all countries but England. And older respondents are more prone to take these considerations than 18 year old respondents. The importance of self-evaluated income, trust in the industry and knowledge to global labels varied between the countries, and the country variances will be discussed next.

### *Differences between Countries*

The final model (four) explained between 34 percent (Sweden) and 41 percent (Germany) of the variation in the dependent variable in the countries studied. The demographic variables were most important in Norway, and age and gender were not significant explanatory variables in England. England is thus the country where the demographic variables explained the least. Self-evaluated income were only significant in England ( $p = .005$ ) and in Sweden ( $p = .016$ ). The significance of the trust variable also varied between the countries and were only significant in England ( $p = .000$ ) and in Norway ( $p = .038$ ), but the trust variable have the opposite effect in the two countries.

In England higher trust in the industry is correlated with a higher score on the political consumer index while higher trust in the industry in Norway is correlated with a lower score on the political consumer index. The awareness of the four global labels in the model is a significant explanatory variable only in England where the effect is positive. The most important explanatory variables are however the same for all countries as the introduction of the purchase variables leads to a jump in the explained variability for the overall model in all countries and as the variables (except for the “not bought labelled” variable in England, France and Norway) are significant.

**Table 4.16: Stepwise linear regression analysis for each country. Dependent variable is the political consumer index.**

Model	Germany (N=1004)			England (N=989)			France (N=969)			Norway (N=930)			Sweden (N=1018)		
	B	Std. Error	t	B	Std. Error	T	B	Std. Error	t	B	Std. Error	t	B	Std. Error	t
1 (Constant) Sex Age Children under 15 Income Income res.	4,923	0,392	12,559***	5,686	0,377	15,084***	5,44	0,403	13,485***	4,965	0,372	13,339***	6,8	0,335	20,286***
	0,96	0,145	6,602***	0,369	0,158	3,604***	0,576	0,166	3,471***	1,018	0,145	7,021***	0,648	0,144	4,509***
	0,035	0,005	6,588***	0,008	0,006	1,483 n.s	0,04	0,006	6,748***	-0,036	0,005	7,387***	0,016	0,005	3,222***
	0,361	0,125	2,893**	0,125	0,111	1,123 n.s	0,245	0,115	2,121 n.s	-0,057	0,097	-5,90 n.s	,196	0,1	1,956 n.s
	0,149	0,084	1,773 n.s	0,158	0,079	1,991*	-0,048	0,09	-5,35 n.s	,019	0,083	,224 n.s	0,052	0,065	,797 n.s
	0,299	0,608	,492 n.s	-0,272	0,512	-,532 n.s	,252	0,561	,449 n.s	-0,321	0,524	-,612 n.s	,253	0,49	,516 n.s
2 (Constant) Sex Age Children under 15 Income Income res. Trust Trust res.	4,876	0,443	11,004***	5,037	0,415	12,132***	5,244	0,441	11,894***	5,621	0,398	14,138***	6,726	0,364	18,477***
	0,962	0,146	6,610***	0,539	0,156	3,448**	0,592	0,165	3,591***	1,056	0,144	7,321***	0,646	0,143	4,510***
	0,035	0,005	6,551***	0,009	0,006	1,632 n.s	0,04	0,006	6,834***	0,036	0,005	7,412***	0,017	0,005	3,417**
	0,362	0,125	2,900**	0,108	0,11	,979 n.s	0,238	0,114	2,079 n.s	-0,053	0,096	-,554 n.s	,188	0,1	1,884 n.s
	0,144	0,084	1,713 n.s	0,122	0,079	1,551 n.s	-0,048	0,089	-,540 n.s	,026	0,083	,309 n.s	0,025	0,065	,379 n.s
	0,341	0,608	,561 n.s	-0,151	0,309	-,297 n.s	,585	0,561	1,043 n.s	-0,19	0,52	-,364 n.s	,473	0,493	,961 n.s
	0,03	0,063	,474 n.s	0,278	0,065	4,269***	0,087	0,066	1,319***	-0,278	0,065	-4,280***	0,073	0,06	1,203 n.s
	-0,757	0,482	-,571 n.s	-,210	0,436	-,481 n.s	-1,596	0,465	-,3432**	-1,168	0,436	-,2,678**	-0,934	0,344	-,2,714**
3 (Constant) Sex Age Children under 15 Income Income res. Trust Trust res. Knowledge	3,972	0,487	8,153***	3,92	0,447	8,780***	4,541	0,464	9,792***	5,031	0,433	11,631***	5,771	0,403	14,305***
	0,925	0,145	6,400***	0,432	0,154	2,796**	0,521	0,164	3,176***	1,006	0,144	6,970***	0,581	0,142	4,092***
	0,037	0,005	6,922***	0,011	0,005	2,097*	0,043	0,006	7,346***	0,038	0,005	7,802***	0,019	0,005	4,051***
	0,357	0,124	2,878**	0,113	0,108	1,047 n.s	0,215	0,113	1,899 n.s	-0,056	0,096	-,580 n.s	,166	0,098	1,683 n.s
	0,109	0,084	1,306 n.s	0,098	0,077	1,265 n.s	-0,086	0,089	-,970 n.s	,034	0,082	,419 n.s	0,001	0,065	,018 n.s
	0,179	0,604	,297 n.s	0,052	0,501	,104 n.s	0,554	0,555	,998 n.s	-0,111	0,518	-,214 n.s	,538	0,487	1,106 n.s
	0,045	0,063	,721 n.s	0,263	0,064	4,100***	0,084	0,065	1,289 n.s	-0,268	0,065	-4,138***	0,082	0,06	1,379 n.s
	-0,307	0,489	-,628 n.s	,213	0,434	,492 n.s	-1,347	0,464	-,2,906*	-0,979	0,438	-,2,237*	-0,539	0,348	-1,350 n.s
	0,281	0,066	4,286***	0,392	0,064	6,123***	0,27	0,06	4,487**	0,191	0,057	3,365**	0,313	0,06	5,217***

Contd...



## Discussion

Eco-labelling of products in general is widespread. However, eco-labelling of textiles is a relatively new phenomenon. Over the last few years established eco-labels has started to include criteria requirements for textiles and new labels focussing solely on textiles have been established. What does this development mean seen from a consumer perspective? How are the labels – and the problems the labels are trying to solve – perceived by the consumers? In the following chapter these questions are discussed further based on the collected survey data presented in the previous chapters.

### *Consumer Perceptions of Relevant Labelling Schemes*

In order to be able to reflect on whether eco-labelling of textiles will be a success in the future, we need to understand how it is functioning today. As discussed earlier, it is challenging to investigate consumer knowledge (especially when one suspect it to be low) through a consumer survey. The results from the survey presented in this report do however give us an indication about the level of knowledge and interest among the consumers in five European countries.

The results from the survey demonstrate significant variation in the consumers' knowledge about the relevant labels for textiles and a significant variation in consumer attitudes and practices related to eco-labelling of textiles and political consumption of textiles. Thus the results indicate how useful the labels are, and potentially can be, for the consumers. This variation is expressed in several ways: Women report to be more concerned about the environment when buying textiles than men and older respondents seem to some degree to be more concerned about the environmental implications than younger respondents. The variation in the respondents' knowledge about the labels demonstrates that the respondents in general are more aware of the national and the smaller regional labels than the global labels. This can be a result of the history and scope of the national labels as they often have a longer history than the global labels.

This finding can be seen in relation to Stø and Strandbakken's (2005) findings from a study of Norwegian consumers: Norwegian consumers have a relatively high degree of confidence in the national labels that is managed by a governmental/public institution, while the trust in EU-labels is given the lowest ranking by the same consumers. A reason for this lower trust in global labels might be that the labels are not very well known among the consumers. The limited knowledge about the labels

can again lead the consumer to prefer products with a label that is already known to them. In order to trust the label, the consumers need to be aware of the necessary information about the label.

Thus the relationship between knowledge about the labels and trust in the labels are connected, and according to a report by Heidenstrøm, Jacobsen and Borgen (2011:102) the less trust the consumer have in a label, the more sceptic he/she is to using the labelling scheme.

The results from the survey show that very few respondents have seen the labels on textiles, demonstrating what we already know – that the eco-labelling of textiles are limited. The consumer knowledge about the different labels are however important when discussing the potential effect of eco-labelling of textiles in the future. In order for the consumer to be able to take reflected (less harmful for the environment) purchasing decisions, they need information about the product. If an already well-known eco-label is used to confirm that the garment is less harmful for the environment it will be easier to reach out to the consumer with the information.

The “knowledge index”, demonstrates that the knowledge to four of the global labels presented varies significantly between the countries. The respondents from Norway are the least knowledgeable about the global labels, while the German respondents’ seem to be the most knowledgeable. This indicates that the market for global labels is different in the countries studied, and that it might be easier to reach out to the consumers through global labels in Germany than in Norway.

Even though the eco-labelled textiles available for purchase are limited, a significant share of the respondents in all five countries state that they are taking environmental considerations when buying textiles, and approximately a fifth or more of the respondents in all countries report that they have been using boycott or boycott strategies when buying textiles throughout the past 12 months. As problematised earlier in this report, these numbers do not necessarily correlate with the respondents’ actual purchasing patterns as the respondents in surveys on ethical issues tend to exaggerate their own efforts and willingness to pay. The results do however give us an indication of the level of concern among the consumers and about their willingness to take action in order to reduce the environmental impacts from the textile sector. In the next section these consumer practices and attitudes towards eco-labels in general will be discussed.

### *Attitudes and Practices*

The consumers express support towards eco-labels in general, and the majority of the respondents in all countries agree with the statement that “labelling helps me make better choices when I am shopping”. Fewer respondents state that they trust the information on labels to be true and between 36 percent (Germany) and 50 percent (Sweden) argue that there are many labels they don’t know the meaning of. The majority of respondents are thus positive towards labelling. The consumers’ problem is however connected to the amount of labels on the market, also demonstrated by the limited knowledge about the global labels in the previous section.

As mentioned, a significant share of the respondents in all countries argue that they are concerned about the environment when they buy textiles, we do however not know *how* they act when they claim to take environmental considerations except for the respondents that report that they have “bought clothes or textiles with special labels to support the sale of these products, such as fair trade or eco-labels” and that they have “avoided buying certain clothing brands or shopping in certain stores because of ethical concerns”.

We did however ask the respondents what they regarded as the best strategy for the environment: buying fewer clothes, extending the length of use by repairing them, washing clothes less often or buying eco-labelled clothes? Of these strategies, buying eco-labelled clothes were regarded as the second best alternative in Germany, France and Sweden. In Norway, that strategy was considered as the third best alternative for the environment. When asked which of the strategies that would be easiest for them to implement, buying eco-labelled clothes were considered as the second best alternative in Germany and the third best alternative in the other countries.

This result need to be interpreted in relation to the other findings, especially the differences in consumer knowledge about eco-labels. The respondents in Germany seem to be generally more positive towards the strategy of eco-labelling and they are the respondents scoring highest on the knowledge index. For eco-labelling to emerge as a viable alternative, there need to exist a real market for eco-labelled clothes.

Even through it is small, there seems to exist a real market for eco-labelled clothes and textiles for children and babies (Austgulen and Stø 2013). The results from the consumer survey are to a large extent confirming this finding. From 15 percent of the respondents in England to approximately 37 percent of the respondents in Germany and France

moderately or strongly agree with the statement that they are more concerned about the environment when they buy clothes for small children than when they buy clothes for themselves.

When asked if they are more concerned about health when they buy clothes for small children than when they buy clothes for themselves, the agreement is much higher. As eco-labelled clothes often are better for health because of less use of toxic chemicals in the production, the results from the analysis demonstrate that there seems to be a demand for eco-labelled (or health labelled) textiles for children in Europe.

Even though a significant share of the respondents report that they are thinking about the environment when buying clothes and textiles, this concern is rated as the lowest priority (compared to price, quality and durability, design, health, colour and fair trade) for the respondents when buying clothes and textiles. It was demonstrated that many respondents are concerned about several factors at the same time, while other respondents score consistently low on several factors.

Respondents arguing that environmental considerations are important also emphasise fair trade and health. An interesting question touched upon in this report is which factors that affect the consumers to emphasise these considerations when buying textiles. The analysis in chapter 9 demonstrate that the respondents willingness to pay, the availability of eco-labelled products and whether or not the respondents had already bought labelled clothing are the most significant explanatory factors in all countries.

### *Who do the Consumers Perceive as the Responsible Actors?*

The consumption of clothing is not always subject to serious reflections, but very often it is elements of our everyday life, characterised by strongly routinised practices. As mentioned in the section above, because clothing constitutes a big part of peoples' identity, other aspects and considerations are more important when buying clothes and textiles than environmental considerations. However, a precondition for the success of eco-labels is the fact that the consumers must feel socially responsible for the consequences of their consumption habits, and the consumers must feel empowered as consumers and that eco-labelling represents a solution to the problem.

The results of this consumer survey shows that from 26 percent of the Norwegian respondents to 41 percent of the German respondents thinks that their voice as a consumer counts very much or quite a lot when it comes to the assortment of clothing in the stores. Even though the

respondents' feelings of possibility to participate are varying, a majority of the respondents in all countries argue that they have very much or quite a lot responsibility to buy products that is as environmentally friendly as possible. An alternative to direct consumer action on the market, which presumes a market that differentiates on these aspects, is that environmental challenges are regulated through other means like legislation.

The results from the survey demonstrate that from 49 percent of the Swedish respondents to 69 percent of the French respondents argue that "it is primarily the government's job to implement measures to address environmental concerns in the textiles and clothing industry". The statement does not differentiate between governmental measures like legislation and facilitation for eco-labelling schemes, but the results indicate that the respondents place a significant share of the responsibility on the governments even though they are ready to take action themselves.

A moderate share of the respondents in all countries state that they trust the T&C industry to take environmental considerations into account when producing their goods. These results indicate that there is a need for regulation, either through traditional regulations policies which stipulate mandatory products or process standards, or through new environmental policy instruments like eco-labels. The consumers do not trust the industry alone, and will need a guarantee from a third party to trust industry measures. Austgulen and Stø (2013) demonstrate that the industry is of a rather different opinion as they would rather focus on developing their own labels and/or environmental strategy without relying on established eco-labels.

### *Future Consumer Demand and Consumer Responsibility*

Eco-labels are presented as a solution where the consumers hold a key role and are given a significant share of the responsibility for solving the environmental challenges in the textile industry. The consumers are ascribed roles as acting and morally responsible persons who, through their choices in the market can make a difference and can solve social and environmental problems. An important condition for the success of the eco-labelling strategy is thus that the consumers are willing to take on this responsibility.

In this report we have seen that approximately 50 percent of the respondents in all countries surveyed recognise that they have a responsibility as a consumer to buy products that are as environmentally friendly as possible. However, the results also illustrate that the respondents in all countries (to varying degrees) also views the national

governments as important responsible actors. These results indicate that the consumers are willing to take on a part of the responsibility, and that they are willing to use their consumer power to try improving the sustainability of the industry.

Another important condition for the success of eco-labels is that the proposed solutions, in this case the relevant eco-labels, are known to the consumers and that products wearing these labels are available in the shops. Even though we have not done a market analysis of the availability of eco-labelled textiles and clothes on the market, the general impression from the consumer survey and the stakeholder interviews (Austgulen and Stø 2013) is that the availability is very low. We do however have reason to believe that the availability might vary between the countries studied in this report. When the respondents in chapter 7 were asked if they know where to shop if they want to buy eco-labelled textiles the numbers varied between the countries.

In Norway, only 11 percent of the respondents agreed with the statement while 25 percent of the respondents in Germany did the same. This indicates that the availability of eco-labelled clothes and textiles are greater in Germany than in Norway. The awareness of many relevant eco-labels are also generally higher in Germany (and in Sweden) than in Norway (and England). This indicates that there is a stronger market for eco-labelled products, and thus a greater current and potential for future demand for eco-labelled products in these countries.

However, a major finding presented in this report is that the knowledge of global eco-labels, which are by many stakeholders perceived as the best solution, is limited among the consumers in all countries. This low awareness of global labels represents a fundamental challenge for the use of eco-labels as an effective solution as the consumer knowledge of the labels represents the most basic condition the labels should satisfy in order to be successful.

## **Conclusions**

Sustainability issues in the textile industry are being given increased attention, and one of the most popular solutions presented is the use of eco-labels (Boström and Klintman 2008). However, if eco-labels are to be successful several conditions need to be satisfied. From the consumer perspective a first condition is that there need to be a certain level of knowledge in the population regarding the problems the labels are trying to solve, in this case the environmental consequences of the production (and consumption) of textiles. A second condition is that the eco-labels

used must be well known and trusted by the consumers. A third condition is that the consumers need to feel a certain responsibility for solving the challenges in the textile industry. A fourth condition is that products with the relevant eco-label need to be available for purchase.

In this report we have studied the consumers' perceptions and attitudes towards the use of eco-label in the textile industry based on the following research questions:

1. How do the consumers perceive the relevant labelling schemes for textiles?
2. What are the consumers' attitudes towards and practices regarding eco-labelling of textiles?
3. Who do the consumers' consider to be the responsible actors?

These questions have guided the structure of the report, and were briefly discussed in the discussion chapter (chapter 10). Based on the presentations of the results and the discussions, the reports' main findings will be highlighted in the following section.

### *Main Findings*

A main challenge for the success of eco-labels for textiles is the limited awareness among the consumers about the relevant labels for textiles. In the analysis of the consumers' perceptions of the labels tested in the survey, one clear pattern is identified: the awareness of global labels is much lower than the awareness of national and smaller regional labels. Seen in relation to the findings from Austgulen and Stø (2013) regarding the global industry's preference of global labels rather than national labels, it is clear that this lack of awareness among the consumers represents a significant challenge.

Another important finding in this report is that it is possible to distinguish between two different types of consumers when studying consumption of textiles. First, there are the consumers that (claim that they) emphasise health, environment and fair trade when buying clothes and textiles, these have been called "political consumers" in this report. Second, there are the consumers that (claim that they) emphasise design, colour, price and quality when purchasing clothes and textiles, in this report these have been identified as materialistic and/or fashion oriented consumers. This indicates that there is a significant market segment potentially interested in using eco-labels as guides when they purchase textiles in the future.

When studying why some respondents score higher on the political consumer index than others, we find that the respondents who know where to buy eco-labelled clothes, have bought eco-labelled clothes before and the ones who are willing to pay more for labelled garments are more prone to consider the environmental, health and fair trade aspects of their purchases. Even though it is difficult to identify the causal direction of this relationship, it is clear that an increase in availability would increase the consumers' ability to take environmental considerations when shopping. An increase in the availability might as well increase the consumers' awareness of the sustainability challenges in the textile industry. Women in all countries also score higher on the political consumer index than men.

As previously mentioned, an important condition for the success of eco-labels is that the consumers feel that they are responsible actors, and that their actions matter. The findings from this study reveal that approximately 50 percent of the respondents in all countries agree to the statement "I think that I have a responsibility as a consumer to buy products that are as environmentally friendly as possible". This indicates that the market for eco-labelled textiles is quite big in all countries surveyed.

Last, but not least, the findings from this study reveals that there are significant variations between the different countries studied. Overall, respondents in Germany and Sweden score highest on the political consumer index while respondents from Norway and England score lowest. Respondents in Germany have the best knowledge about the global labels tested, while the Norwegian respondents have the poorest knowledge about these labels. German respondents are also the ones claiming to have the best knowledge of where to shop if they want to buy eco-labelled textiles and they score highest when asked how much they think their voice as a consumer counts when it comes to the assortment of clothing in the stores. The country variations highlight that the market for eco-labelled clothes and textiles is quite different in the countries studied, and thus that the future demand for eco-labelled textiles might be quite different from the different countries in Europe.

### *Limitations and Future Research*

The findings presented in this report are based on the results from a cross-national consumer survey which were conducted as a web survey in March 2012. The survey methodology represents an opportunity to reach out to a wide range of respondents and to draw a representative

selection of the populations in the respective countries. The method does however limit the possibility to get deeper knowledge about the respondents reasoning, and the survey methodology is best suited to study attitudes.

In this survey it was especially challenging to measure the consumers knowledge to the labels presented. The name of the label is often a part of the logo presented, and the respondent can thus (easily) resonate and assume what the labels represent. It is thus hard to know if the respondent actually knows the label or if he/she associates it with the “correct” description. However, as long as the respondents have the “correct” association, one can argue that the label fulfils the requirement of recognition.

In order to get a deeper understanding about what the European consumers think about environmental labelling of textiles qualitative consumer interviews is necessary. In this report a first and general overview of the consumer knowledge about eco-labels, attitudes towards eco-labels and consumption practices have been presented. Especially consumption practices are difficult to measure through consumer surveys as we know that the respondents tend to exaggerate their own role. In future studies, it would be interesting to compare the respondents reported practices with actual sales data. It would also be beneficial to do a market analysis of how many eco-labelled garments and textiles that is actually available in the market. This would give us an indication of whether the availability on the market (and not only the perceived availability) can explain the differences between the countries studied or if these differences is explained by other factors like differences in the regulatory regimes.

The differences in consumer awareness of especially global labels, evident in 4.2.4, between the countries studied in this report are significant, and should be studied further. As we already touched upon, the differences in availability might be a reason for the differences in awareness between the countries, but the different governments might as well place different weight on the use of eco-labels as a regulatory strategy or on the promotion of national versus global labels.



# 5

## Conclusion & Recommendations

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### Synopsis of the Study

This study explores the nature of demand for eco-labeled T&C products across Europe and eco-compliance issues in Indian T&C sector. The study analyses demand-side perceptions from European consumers. Has green consumerism completely evolved across Europe? Are consumers fully conscious about various eco-labelling schemes in practice? What is their level of willingness to pay for green T&C items? The study also explores stakeholders' perceptions related to eco-labelling programmes, such as what makes eco-labelling programmes more successful. And how can governments promote environmental sustainability along the T&C supply chain?

On the other hand, the study analyses supply-side constraints facing the Indian T&C sector. Over the years, the sector has been negatively affected by environmental-related trade barriers. Although there is a huge demand for T&C products from the Western world, Indian T&C manufacturers must comply with certain environmental standards to meet foreign demand.

Historically, India used to export cotton to England as raw material for spinning and clothing firms. But with the dawn of the 21<sup>st</sup> century, the production base of T&C items has shifted from developed economies to developing ones like India. This shift in production base occurred mainly because developing countries have cheap labour as opposed to developed ones. Also, developed countries have become more conscious over time towards environment protection compared with developing countries. Developed economies have stringent environmental regulations that have restrictions on the level of pollution and emissions. So, from both business as well as environmental perspectives, the production base of several industries, including T&C sector, has shifted to developing economies like India.

Today, India is one of the major T&C exporting countries in the world. The sector has established itself as one of the major employment-providing sectors in the country. It provides direct employment to more than 35 million people and indirect employment to more than 50million people. And it holds great potential to emerge as the number one exporting sector in the country.

But in recent years, the sector has faced environmental-related trade barriers in the Western world. With the emergence of green consumerism in Europe, Europeans have become very conscious about promoting green products. Whatever products they use or consume, they want to ensure that those products are manufactured in an environmentally safe manner. In case of T&C products, various eco-labelling programmes such as the Nordic Swan, the EU Flower, and others have outlined specific environmental standards. If clothing items are manufactured meeting those environmental standards, then such products will not face any environment-related trade barriers in European countries.

But despite their desire to comply with foreign environmental standards, Indian T&C producers are left with a number of eco-compliance challenges. First, there are so many foreign eco-labels in the market. There are public and private eco-labelling standards. And based upon destination countries, different environmental certifications are required. As such, Indian producers are puzzled as to which eco-labelling standard to adopt. Well, it is practically impossible to comply with all environmental standards that have been designed across the globe. What sounds reasonable is complying with such an eco-labelling standard, which is widely accepted across the EU and the US. Second, eco-compliance requires significant cost and upgradation of technology. Small and medium enterprises in the T&C sector cannot sustain the increased cost of production resulting from eco-compliance. Third, developing countries have argued that environment-related trade barriers have been imposed upon them as trade-distortionary measures. And there is no such guarantee that Indian producers will not face further barriers in the name of environmental regulations.

## **Survey Summaries**

### ***A. Producer Survey***

In order to find out the level of environmental consciousness among Indian producers and promote the adoption of foreign environmental standards in the T&C sector, a Producer Survey was conducted across major T&C production centres in India. A total of 105 firms

(manufacturers and exporters) were interviewed face-to-face, mainly regarding their businesses and environmental-related trade barriers. Some of the key findings from the survey are as follows:

1. While there is a required urgency for T&C firms to adopt foreign environmental standards for penetrating the European market, the much-needed credit for acquiring green technology is lacking. In other words, very few T&C firms have access to subsidised credit, which is essential for upgrading their present level of technologies.
2. Economic turmoil and financial crisis in the Western world have negatively affected the Indian T&C sector. Majority of the surveyed firms faced export order cancellation and subsequently reduced capacity utilisation.
3. With regard to environmental standards, the level of awareness among T&C firms is limited. They require much more information on various environmental standards and benefits emanating from eco-compliance. They require substantial capacity-building training programmes on eco-labelling schemes in the T&C sector. Interestingly, the survey finds that quite a number of firms have complied with REACH-European Environmental legislation, GOTS, Oeko-Tex, and SA among others.
4. The survey analysis shows that there is a positive relationship between eco-compliance and export volume. If Indian T&C firms adopt foreign environmental standards, then their export volume to Europe increases.
5. Besides facing environmental-related trade barriers, Indian T&C products have faced increased import duty, which has negatively affected the export volume.

### ***B. Stakeholder Interviews***

In order to find out concerned stakeholders' perceptions towards eco-labelling schemes, stakeholder interviews were conducted in Norway. A total of 17 interviews were conducted with 23 key informants, including personnel from governmental institutions, non-governmental institutions, labelling organisations, environmental organisations, textile industries, and others. The survey was mainly undertaken to assess issues with environmental standards and gather stakeholders' views on making eco-

labelling programmes more effective and efficient. The survey analysis sheds light upon the specific roles that concerned stakeholders can play towards increasing sustainability of the T&C supply chain. It also attempts to find out the best solutions so as to promote sustainability in the T&C sector. Some of the key findings from the interviews are as follows:

1. There seems to be a common understanding among Norwegian stakeholders about the environmental challenges in the textile value chain, with a special emphasis on the cotton production. However, this concern has not, so far, been manifested into specific actions and clear allocation of responsibilities. It seems like most stakeholders are waiting for raising consumer awareness and changing consumer behaviour.
2. All stakeholders are pointing at the crucial role of consumers in the market for sustainable clothing. There is an agreement that the pressure from the consumers is lacking, and that it will make a difference if consumers acts upon their responsibility. There are, however, disagreements about the potential impact of such pressure, but consumers' practices in other sectors have shown the potentials.
3. The chemical content of textiles that are produced and/or sold in Europe falls under the REACH regulation which prohibits use of certain hazardous chemicals. European textile importers and companies have also developed their own codes of conducts that regulate e.g. the chemical content in the imported textiles.
4. The Climate and Pollution Agency (CPA) in Norway is the responsible institution in dealing with environmental regulations and enforcing them. The agency claim that some companies are quite serious about environmental issues, others are not that serious.
5. Nordic Eco-labelling scheme is the official eco-labelling programme of Norway. The Norwegian government seeks to promote it, which has made it more prominent and popular among producers and consumers than other eco-labelling schemes.
6. Green public procurement (GPP) may have positive impact on the use of eco-labels and environmental standards.
7. The so-called "jungle of labels" seems to have created confusion among producers as to which eco-labelling programme to

implement. Hence, the informant from the Federation of Norwegian Industries has argued that a greater consensus towards adopting a set of environmental standards must come from local governments or from governments in producing countries.

8. Eco-labelling institutions have time and again argued that industries will eventually benefit from the adoption of eco-labelling schemes. For instance, initially, paper industry in Norway was sceptical about adopting eco-labelling, but when it was eventually done, the industry benefited immensely.

### *C. Consumer Survey*

In order to assess consumers' perceptions on eco-labelling schemes, a Consumer Survey was conducted in five European countries, namely, Sweden, France, Germany, Norway, and the UK. Approximately 1,000 respondents in each country were surveyed using web surveys. The survey explores consumer attitudes towards various environmental standards. It also explores whom the consumers perceive as responsible actors for promoting environmental sustainability along the T&C supply chain. Some of the key findings from the survey are as follows:

1. A main challenge for the success of eco-label for textiles is the limited awareness among the consumers about the relevant labels for textiles. In the analysis of the consumers' perceptions of the labels tested in the survey, one clear pattern is identified: the awareness of global labels is much lower than the awareness of national and smaller regional labels.
2. Another important finding is that it is possible to distinguish between two different types of consumers when studying consumption of textiles. First, there are the consumers that (claim that they) emphasise health, environment and fair trade when buying textiles. Second, there are the consumers that (claim that they) emphasise design, colour, price and quality when purchasing clothes and textiles. This indicates that there is a significant market segment potentially interested in using eco-labels as guides when they purchase textiles in the future.
3. With regard to environmental concerns while buying clothes, the sensitivities differed from country to country. Norwegians were

least concerned about the environment while buying clothes when compared with Germans, French and Swedish.

4. An important condition for the success of eco-labels is that the consumers feel that they are responsible actors, and that their actions matter. The findings from this study reveal that approximately 50 percent of the respondents in all countries agree to the statement “I think that I have a responsibility as a consumer to buy products that are as environmentally friendly as possible”. This indicates that the market for eco-labelled textiles is quite big in all countries surveyed.

### **Policy Recommendations**

1. There must be a clear environmental policy mechanism. This is required because producers are confused by the presence of so many eco-labels.
2. There is a need for harmonising North-South eco-labelling schemes so as to bolster net welfare gains in both regions.
3. Governments must play an active role in promoting environmental sustainability across the T&C supply chain.
4. Indian T&C firms have expertise on producing specific items such as men’s T-shirts, carpets, textile floor coverings, and babies’ garments and clothing accessories, among others. These items are in great demand in the Western world. If Indian T&C firms can address foreign environmental concerns, then there is a huge potentiality of expanding export base of Indian textiles and clothing items across Europe. Hence, there is a greater need for switching to green technology by Indian T&C firms so as to penetrate the European market.
5. Indian T&C firms must be provided with substantial capacity building training programmes on adopting foreign environmental standards.
6. There must be some sort of facilitation such as accessibility of subsidised credit to small and medium enterprises for adopting foreign environmental standards.

7. There is a greater need for creating awareness among Indian consumers regarding green consumerism.
8. Indian T&C manufacturers must comply with environmental standards not only to penetrate the foreign market but also to protect existing surroundings and home environment. This way, they will be meeting their corporate social responsibility (CSR).
9. Besides adopting environmental standards, Indian T&C manufacturers must equally focus on content and design so as to expand their export destinations across the Western world.
10. Developed economies must not hinder the export potentialities of developing economies in the name of non-technical trade barriers. Let free trade prevail for an overall economic prosperity of the region and the world.



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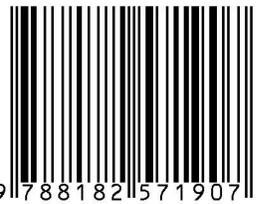
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